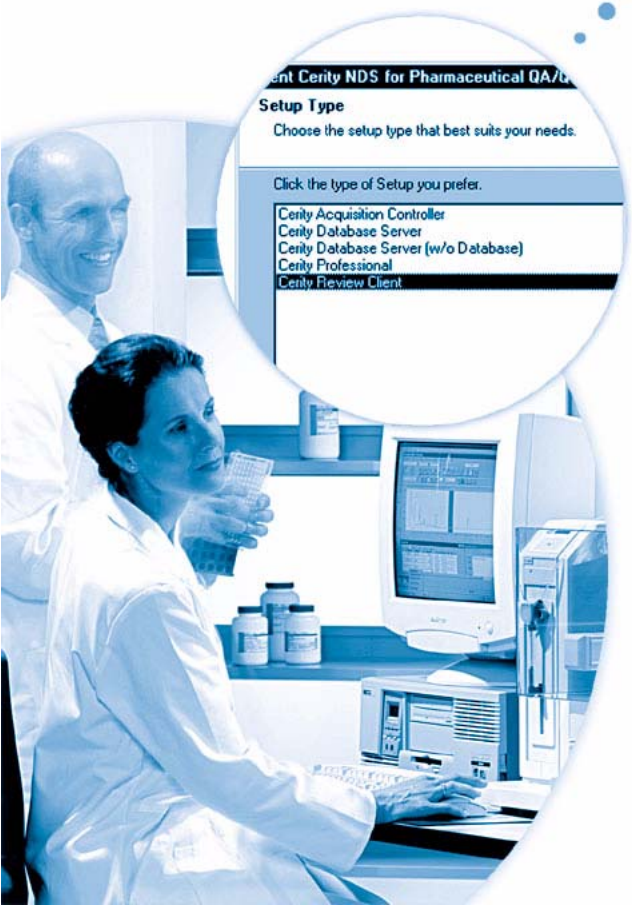
Agilent Cerity Networked Data System for Pharmaceutical QA/QC


Setup Type
Choose the setup type that best suits your needs.
Click the type of Setup you prefer.
Cerity Acquisition Controller
Cerity Database Server
Cerity Database Server (w/o Database)
Cerity Professional
Cerity Review Client

Installation Guide

Agilent Technologies

Notices

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This guide is valid for A.02.xx revisions of the Agilent Cerity Networked Data System for Pharmaceutical QA/QC software, where xx refers to minor revisions of the software equal or larger than 02 that do not affect the technical accuracy of this guide.

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In This Guide...

This guide contains information to install the Cerity Networked Data System for Pharmaceutical QA/QC on both a Cerity NDS Professional system (stand-alone) and Client/Server installation.

1 Prepare to install

In this chapter you prepare your system for Cerity NDS installation, including hardware and resource estimation.

2 Prepare Windows for Installation

In this chapter, you prepare the Windows operating system for installation of Oracle and Cerity NDS software. You verify software requirements, set up network properties, and create appropriate accounts.

3 Install Cerity NDS Database Server or Cerity NDS Professional

In this chapter you install the Cerity NDS Database Server, or in the case of a stand-alone installation, you install the Cerity NDS Professional system.

4 Install Cerity Review Client, Acquisition Controller and Reprocessing Server

In this chapter you install software for the Cerity review client, Cerity acquisition controller, and Cerity reprocessing server.

5 Cerity Review Client on Terminal Server

This chapter describes the installation process and configuration of the Cerity Review Client on a Windows 2000 Server with Terminal Services.

6 Install Waters Alliance Instrument

This chapter covers the installation of a Waters Alliance instrument to your Cerity NDS acquisition controller or Cerity NDS professional system.

7 Uninstall/Reinstall Cerity NDS Software

This chapter describes how to uninstall the Cerity NDS software from your system, and to reinstall it (without reinstalling the database).

8 Troubleshooting

This chapter covers solutions to problems that you might encounter when you install the Cerity NDS software or the Oracle software.

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1
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In this chapter you prepare your system for Cerity NDS installation, including hardware and resource estimation.

If you purchased a bundled system (with the software installed), use this guide only if you are installing a Waters Alliance instrument. Go to Chapter 6, “Install Waters Alliance Instrument”.

If you plan to install a Cerity NDS Professional system, the database server, the acquisition controller, and the review client are transparently installed on a single computer.

If you plan to install a client/server system, you install the database server, acquisition controller, and the review client on separate computers connected in a network. A client review interface is installed with the database server and acquisition controller, but we do not recommend using the client review interface on the database server and acquisition controller, because these computers should be dedicated to their more intended operations. The review client operation is intended on a separate computer for remote access to the Cerity NDS system. Refer to the checklist below.

Table 1 Installation Checklist

Tasks	Cerity NDS database server Domain	Cerity NDS acquisition controller Domain	Cerity NDS review client Domain	Cerity NDS Professional (Stand-alone)
• Check the invoice or equipment order. • Check that all equipment and software, etc., are on site. • Check the Cerity NDS software product number. Check that the product number is appropriate. • Check that you have the correct number of Oracle licenses. • Check that you have the correct number of Cerity NDS licenses. • Check that you have correct number and type of instrument licenses. • Check that all devices, instruments and computers are correctly connected. • Check that you have the correct number of GMP licenses if you plan to implement strict audit review. • Check the software status bulletin (SSB) on the CD. You can find the SSB in support\ssb on the Cerity CD. • Check the file readme.txt on the CD. • Check the hardware requirements in this book for non-bundled systems. • For non-bundled systems, check the Microsoft® Hardware Compatibility List at www.microsoft.com • Check the software requirements. • Check the infrastructure requirements. Check with your network support personnel before the installation. • Check that only NTFS is used for all partitions/disks, • Connect all computers to the LAN before you configure and install software. • Check the instrument requirements. • Check that no other process or running program interrupts when you install the Cerity NDS for Pharmaceutical QA/QC.	✓	✓	✓	✓

Table 1 Installation Checklist (continued)

Tasks	Cerity NDS database server Domain	Cerity NDS acquisition controller Domain	Cerity NDS review client Domain	Cerity NDS Professional (Stand-alone)
• Check if the lab needs to enable GMP Strict Review. • Check that each Cerity NDS user has a GMP module. • Calculate the installation size of the Cerity NDS database -- small, medium or large. • Calculate the disk resources requirements based on lab practices. • Calculate the resources for the database.	✓ One GMP license per enabled Cerity NDS user.			✓ Only one GMP license is requiered
• Install Microsoft Windows 2000 Advanced Server OS and the required software on the domain member computer that will host the Cerity NDS database server. • Install and configure the TCP/IP network protocol and site-required network services on the server. For example, DNS server, WINS server, etc. Check with your support personnel. • Check the network connection by TCP/IP, tnsping, before you install the Cerity NDS software and Oracle database server software.	✓			
• Create an domain User Account for Cerity service, on Domain Controller for the communication between Cerity NDS computers. • Create the domain computer accounts. • Check the Domain Computer Account membership. • Check that the computer accounts exist.	✓	✓	✓	
• Install Oracle database server on the computer that will host the Cerity NDS database server module.	✓ Applies to the Cerity NDS database server software			✓ Applies to the Cerity NDS Profes-sional soft-ware

Table 1 Installation Checklist (continued)

Tasks	Cerity NDS database server Domain	Cerity NDS acquisition controller Domain	Cerity NDS review client Domain	Cerity NDS Professional (Stand-alone)
• Run the Pre-Post Installation Check Tool • Install Cerity NDS database server on a computer. • Check whether CAG BOOTP Server or Cerity BOOTP Service will be used. • Check whether the lab will implement strict audit review policy. • Do *not* configure the acquisition controller to operate on this computer.	✓			
• Install, configure and connect on the LAN the Cerity NDS database server in the client-server environment. • Install and configure the Cerity NDS database server. • Install the Microsoft Windows Operating System on the computer intended to operate as an acquisition controller or review client in the Cerity NDS domain. • Install and configure the TCP/IP network protocol and site required network services on the Workstation. For example, DHCP client, WINS client, DNS, etc. Consult with your network support personnel. • Check the network connection by TCP/IP prior to Cerity NDS software (review client and acquisition controller) and Oracle client software installation. • Add the computer to the domain. • Add the domain User Account (Cerity service account) to the Local Administrators group on each Cerity NDS computer. • Check whether CAG BOOTP Server or Cerity BOOTP Service will be used. • If a DHCP client, configure the DHCP client. • Install Oracle client.		✓	✓	
• Run the Pre-Post Installation Check Tool • Install the Cerity NDS acquisition controller software. Applicable in only the client-server model (domain).		✓ Install on a dedicated computer		

Table 1 Installation Checklist (continued)

Tasks	Cerity NDS database server Domain	Cerity NDS acquisition controller Domain	Cerity NDS review client Domain	Cerity NDS Professional (Stand-alone)
• Run the Pre-Post Installation Check Tool • Install the Cerity NDS Review Client software. Applies only in the client-server model (domain).			✓ Install on a dedicated computer.	
• Install the Microsoft Windows Operating System on the computer intended to operate as a Cerity NDS Professional system. • Install and configure the TCP/IP network protocol and site required network services on the computer. For example, DHCP client, WINS client, etc. Check with your network support personnel. • Create Local User Account for Cerity service communication and add it to the Local Administrators group. • Calculate the resources for database. • Determine the Review Policy. • Check the network connection by TCP/IP prior to Cerity NDS and Oracle database server software installation • Run the Pre-Post Installation Check Tool • Install Cerity NDS Professional. • Check whether CAG BOOTP Server or Cerity BOOTP Service will be used. • Check if the lab will implement strict audit review policy. • Check whether the acquisition controller module will host a Waters instrument. • When the system is a DHCP client, check whether the IP address is reserved, excluded or outside of DHCP scope.				✓

Table 1 Installation Checklist (continued)

Tasks	Cerity NDS database server Domain	Cerity NDS acquisition controller Domain	Cerity NDS review client Domain	Cerity NDS Professional (Stand-alone)
• Install and configure the analytical instruments as described in their respective installation manuals and as directed in post installation guides provided with the Cerity NDS software.		✓		✓
• Configure CAG BOOTP Server or Cerity BOOTP Service on a designated computer, if applicable. • Configure the Cerity NDS application and perform post-installation procedures. • Refer to the online help for the Cerity Software Administration application.	✓	✓	✓	✓

Step 1. Check hardware

1 Check that your Agilent instruments are properly installed. Refer to the installation guide for your instrument.

2 Check that your instruments have these minimum firmware revisions:

Table 2 Firmware Revisions

Instrument/Device	Firmware Revision
Agilent 1100 HPLC	A.05.06
Agilent 6890 GC	A.03.05
Agilent 6850 GC	N.04.08
Agilent 35900E Dual Channel Interface	E.01.02
Agilent G1369A Lan Interface	A.01.01
Hewlett-Packard J2552B JetDirect Card	A.08.32
Hewlett-Packard J4100A JetDirect Card	K.08.32

3 Check that all of your computers are physically connected to the LAN.

Step 2. Check licenses

1 Check that you have at least as many Cerity NDS user licenses as the number of users who will use the system at the same time.

   If you have 10 users in your lab, but only 5 will use the system at the same time, you need 5 Cerity NDS user licenses.

2 Check that you have as many Oracle licenses as you have users in your lab.

   You are required to have one Oracle license for each individual user on the system. If you have 10 users in your lab, you will need 10 Oracle licenses, even if only 5 will use the system at the same time.

3 If you are installing the Cerity NDS system into a regulated environment, check that you have the appropriate number of Cerity GMP Module licenses:

   - For Cerity NDS Professional systems, you need only one GMP license.
   - For Cerity NDS client/server systems, you need one GMP license for each Cerity NDS user.

The GMP Module license enables audit comments, electronic signatures and operational checks for strict results sign-off.

NOTE

Cerity NDS for Pharmaceutical QA/QC Professional (Agilent G4000AA) and Client/Server (Agilent G4001AA) include five application specific named user licenses of Oracle Standard. Agilent G4000AA and G4001AA automatically enable 1 Cerity NDS application user license. These licenses may only be used in the context of the Agilent NDS family of products.

Step 3. Check software requirements.

- Check that your system meets the software requirements listed in these tables.

The table below describes the software that is installed on a bundled Cerity NDS system.

Table 3 Software Requirements

Component	Requirement	Comments
Operating Systems	Microsoft Windows 2000 Server or Microsoft Windows 2000 Advanced Server	Cerity NDS for Pharmaceutical QA/QC Database Server
	Microsoft Windows 2000 Professional or Microsoft Windows XP Professional	For Cerity NDS for Pharmaceutical QA/QC Acquisition Controller, Cerity NDS for Pharmaceutical QA/QC Review Client and Cerity NDS for Pharmaceutical QA/QC Professional.
Service Pack	Service Pack 4 (Microsoft Windows 2000) Service Pack 1,1a(Microsoft Windows XP Professional)	Installed separately
Hot Fix	Q326407 Q326407_XP	Automatically installed during installation
MS XML	MS XML 4.0 SP2	Required for the Generic Instrument Control Included in the installation CD-ROM
MS IE	6.0 SP1	Included in the installation CD-ROM
MS MDAC	2.7	Automatically installed during installation.

Table 4 Oracle Software Requirements

Manufacturer	Product	Revision	Comment
Oracle	Oracle DBMS	9.2.0.1.0	Shipped on product CD-ROM; needs to be installed separately
Oracle	OLEDB Provider	9.2.0.2	Shipped on product CD-ROM; needs to be installed separately and immediately after Oracle 9.2.0.1.0
Oracle	Oracle Universal Installer Patch	2.2.0.18.0	Shipped on product CD-ROM; needs to be installed separately and immediately after Oracle 9.2.0.2
Oracle	Oracle Patch Set for Networked Data Systems	9.2.0.3.0	Shipped on product CD-ROM; needs to be installed separately and immediately after the Oracle Universal Installer Patch

Table 5 Additional software integrated with Cerity NDS

Manufacturer	Product	Revision	Comment
Microsoft	Visual Basic	6.0 SP4	Runtime library
Microsoft	Visual C++	6.0 SP4	Runtime library
Inprise (Borland)	C++ Builder	5	Runtime library
Agilent	Agilent I/O Library Software SICL Libraries	J.02.00.01 L.02.01.00	Is needed for GP-IB connection to Waters Alliance supported instruments and may be installed on and after Cerity Professional and Cerity Acquisition Controller software installations.

CAUTION

The Agilent I/O Libraries Rev J.02.00.01 can only be used with the Agilent GPIB card model 82350A or 82350I.

The Agilent I/O Libraries Rev L02.00.01 can be used with all Agilent GPIB cards (82350A, 82350I and 82350B).

Step 4. Check professional hardware requirements

NOTE Do this step only if you are installing a Cerity NDS professional system.

- Check that your hardware meets the minimum requirements as listed in the table below.

Table 6 Hardware requirements Cerity NDS professional system

	Low end	High end
Specification	4 instruments with a maximum of 2 instruments that acquire on-line spectra, like DAD or FLD	8 instruments with a maximum of 4 instruments that acquire on-line spectra, like DAD or FLD
CPU	Pentium 4, 1.2 GHz	Pentium 4, 2 GHz
Memory	768 MB,	1.5 GB
Disk	80 GB	120GB
Display	1024 x 768 pixels, 65536 Colors	1024 x 768 pixels, 65536 Colors

The professional system functions as a database server, acquisition controller and review client.

Step 5. Check database server hardware requirements

NOTE Do steps 5-7 only if you are installing a client/server system.

- Check that your system meets or exceeds the minimum hardware requirements as listed.

Table 7 Hardware requirements for Cerity NDS database server

	Small	Medium	Large
Specification	<= 20 instruments <= 10 concurrent users <= 100000 Test records	<= 70 instruments <= 20 concurrent users <= 330000 Test records	>70 instruments > 20 Concurrent users <= 700000 Test Records
CPU	Xeon, 2.4 GHz	Xeon, 2.4 GHz	Dual Xeon, 2.4 GHz
Memory	1 GB	1.5 GB	3 GB
Disks	8 GB: Operating System, Oracle and Cerity application (RAID1) 10 GB: Oracle Tablespace (Data and Index) 39 GB: Blobs Tablespace	8 GB: Operating System, Oracle and Cerity application (RAID1) 21GB: Oracle Tablespace (Data and Index) 123 GB: Blobs Tablespace	8 GB: Operating System, Oracle and Cerity application (RAID1) 37GB: Oracle Tablespace (Data and Index) 254GB: Blobs Tablespace
	49 GB: Temporary space for backup utility Files, Archive Redo Log files (Raid5) 10 GB: Report Files and Archives (RAID0)	144 GB: Temporary space for backup utility Files, Archive Redo Log files, Archives (Raid 5) 31 GB: Report Files and Archives (RAID0)	291 GB: Temporary space for backup utility Files, Archive Redo Log files, Archives (Raid 5) 66 GB: Reports Files and Archives (RAID0)
Display	1024 x 768 pixels, 65536 Colors	1024 x 768 pixels, 65536 Colors	1024 x 768 pixels, 65536 Colors

NOTE

It is NOT recommended to use the Cerity Database server as a print server for the Review Client computers.

RAID 1 is recommended for the operating system, Oracle (application and data Files) and Cerity application disks.

RAID 5 is recommended for the Backup and, Archive Redo logs files

Step 6. Check acquisition controller hardware requirements

Do this step only if you are installing a client/server system.

- Check that your acquisition controller system meets the minimum requirements listed below.

Table 8 Hardware requirements for Cerity NDS acquisition controller

	Low end	High end
CPU	Pentium 4, 1.2 GHz	Pentium 4, 2.4GHz
Memory	1.5GB	2.5GB
Disk	40GB	40 GB
Display	1024 x 768 pixels, 65536 colors	1024 x 768 pixels, 65536 colors
Max. number of instruments	8 instruments with no on-line spectra capabilities or 3 instruments that acquire on-line spectra, like DAD or FLD	15 instruments with no on-line spectra capabilities or 6 instruments that acquire on-line spectra, like DAD or FLD

Do not connect more than 15 instruments to one acquisition controller, or the performance of your system will decrease.

NOTE It is recommended to locate the Acquisition Controllers computers in close proximity to the instruments. The Acquisition Controller is intended to be located in the instrument laboratory as opposed to a server room (with the Database Server).

Step 7. Check review client hardware requirements

Do this step only if you are installing a client/server system.

- Check that your review client system meets the minimum hardware requirements.

Table 9 Minimum hardware requirements for Cerity NDS review client

CPU	Pentium III, 800MHz
Memory	256 MB minimum, 512 MB recommended
Disk	20 GB
Display	1024 x 768 pixels, 65536 colors

Step 8. Estimate database server capacity

1 In the table below, determine the parameters of your lab.

2 Estimate the values for the parameters listed below.

These values are used to determine required disk space for the database server. They help you project current and future resource requirements for adequate database server operations.

Table 10 Laboratory Database Size Estimation

LAB PRACTICE	VARIABLE
Total number of injections per day and instrument	N
Percentage of injections reprocessed	R
Number of instruments	I
Retention period (number of days the data is kept online)	T

Test Records = N * (1+R%) * I * T

When you run the Database Server installation program, you must select the database size. The size settings are used in only in this installation type. Your specific laboratory practices influence your database size selection. You should do this estimation before installation, because adequate disk space to support your capacity requirements is a significant factor for optimal system operations.

Besides your lab practices, also consider carefully:

- Sufficient free disk space for proper operation of the OS and software. Keep the file system to less than 60 percent of disk capacity to maximize effects of disk drive characteristics and minimize the impact of fragmentation.
- Sufficient free disk space to export or archive data to the hard disk before transferring to storage media.

Step 9. Estimate database server disk quantity

You need ample disk space so that your system runs properly, has room to grow, and creates archives effectively. If possible, keep the file system to less than 60 percent of disk capacity.

Table 11 represents typical characteristics for a populated database of each installation type.

The following factors are used for the calculations in Table 11:

Estimated blob size/test	0.42 MB
compression factor	2,2
Headroom for blobs	10%
Estimated report size/test	0.1 MB;
Report retention period	14 days
DBmaint overhead	20%
NTFS Compression factors for reports	1.5

Table 11 Typical characteristics for a populated database

Configuration Size	Database Server Large	Database Server Medium	Database Server Small	Database Server Tiny	Professional High - 8 instruments	Professional Low - 4 instruments
Max. number of test records	700000	333000	100000	2000	36000	18000
Oracle Tablespaces						
• Data	11543	6663	2735	581	11816	1105
• Index	25424	13358	5483	655	2793	1437
• BLOBS	259185	125369	39250	973	23725	12852
Total Relational Database (MB)	**296152**	**145390**	**47468**	**2209**	**28334**	**15394**
Total test per day	28080	13104	3744	374	1498	749
Total report, uncompressed (MB)	78624	36691	10483	1048	4193	2097
Number of tests for Dbmaint archive	35000	16950	5000	100	1800	900

Table 11 Typical characteristics for a populated database (continued)

Configuration Size	Database Server Large	Database Server Medium	Database Server Small	Database Server Tiny	Professional High - 8 instruments	Professional Low - 4 instruments
DBmaint archive, uncompressed (MB)	14798	7184	2254	56	1356	731
Report, compressed (MB)	52416	24461	6989	699	2796	1398
Backup & Archive Disks (MB)	296152	145390	47468	2209	28334	15394
Cerity DB server installation (MB)	433	433	433	433	433	433
Oracle 9.2.0.2 Standard edition (MB)	1700	1700	1700	1700	1700	1700
Oracle Admin Directory (MB)	200	200	200	50	100	100
Total disk space required (GB)	646.3	317.1	104.0	7.0	61.6	34.3

Step 10. Estimate instrument data traffic

Use Table 12 to calculate the data rate for your instrument configuration.

Table 12 Maximum Instrument Data Rates

Type	Hz	chromatography channels and/or diagnostic signals	Bytes/ Data Point	Data Rate (bytes per second)
Agilent 1100 Variable Wavelength Detector (VWD)	13,74	3	4	164,88
Agilent 1100 Multiple Wavelength Detector (MWD))	20	5	4	400
Agilent 1100 Diode Array Detector (DAD)	20	5	4	400
Agilent 1100 Isocratic Pump	3	3	4	36
Agilent 1100 Binary Pump	3	6	4	72
Agilent 1100 Quarternary Pump	3	7	4	84
Agilent 1100 Thermostatted Column Compartment (TCC)	1	2	4	8
Agilent 1100 Refractive Index Detector (RID)	20	1	4	80
Agilent 1100 Fluorescence Detector (FLD)	20	2	4	160
Agilent 1100 Wellplate Sampler (WPS)	1	1	4	4
Agilent 1100 Thermostatted ALS	1	1	4	4
Agilent 35900E Analog Digital Converter	100	2	4	800
Agilent 6890 GC	200	2	4	1600
Agilent 6850 GC	200	1	4	800

A data point is 4 bytes long. The modules generate the same amount of data, no matter if inside or outside of a test. So for example the 1100 DAD will generate a maximum of 400 bytes/sec. A typical instrument generates less than 430 bytes/sec.

The calculated data rate may be used by network administrators to determine the potential bandwidth utilized by instruments and configured modules. The results represent the data rate from the instrument, on the data cable, through the acquisition controller to the database server.

Step 11. Determine instrument configuration for optimal load balance

This applies only to client/server systems.

1 Plan your system so that you use no more than the maximum supported instruments per Acquisition Controllers.

2 For large systems with a heavy processing load, add a Reprocessing Server computer for every 10 concurrent reprocessing users in your client/server system to perform off-line reprocessing. These are Acquisition Controllers with no instruments added.

After you have installed the software, you will be instructed in this guide to configure the review clients to use the off-line acquisition controllers to reprocess data.

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In this chapter, you prepare the Windows operating system for installation of Oracle and Cerity NDS software. You verify software requirements, set up network properties, and create appropriate accounts.

Step 1. Partition your hard disk

1. Create a C: partition with a maximum size of 7.8 GB.
2. Install the operating system and page file on this partition.

   If space permits, you will also install Oracle and Cerity files in this partition.
3. Set the initial size of the paging file to the value displayed in the Virtual Memory dialog box's Maximum Size box.

   This eliminates the time required to enlarge the file from the initial size to the maximum size and limits disk fragmentation.
4. For single disks systems, use the remainder of the C:\ drive as a data directory for Cerity. Based on the available space and system configuration, the Cerity report directory can be hosted in this available space, another partition on the same disk, or installed on a separate dedicated drive.

If your computer has more than one hard disk, you can create a paging file for each disk. When you distribute information across more than one paging file, you improve performance because the hard disk controller can read from and write to more than one hard disk at the same time.

Step 2. Install required software

Do this step on every computer on the Cerity NDS system, before you install the Cerity NDS software.

NOTE Agilent Technologies recommends that you format the partition with a 4096 byte (4K) cluster size or Allocation Logical Unit (ALU) where the Oracle database files are located, except when on C:, in the Cerity NDS Database Server computers. Do not automatically select the default allocation size, because the default allocation size is predetermined by the volume size and volume sizes vary. To understand the NT disk subsystem and resource environment for the Cerity NDS database server (client/server) configuration, read "NT Server and Disk Subsystem Performance" in the Microsoft TechNet, Technical Information CD.

CAUTION All disk drives and partitions on all computers must be NTFS.

1 Install the required Service Packs for your operating system SP4 for Microsoft Windows 2000 or SP1a for Microsoft Windows XP Professional.

CAUTION Do not replace vendor drivers when asked during the Service Pack installations

2 Install Internet Explorer 6.0 SP1.

3 Install MS XML 4.0 SP2

4 Set the display settings: 1024 x 768 pixels, 65536 colors, using the vendor specific display drivers for your display adapter.

NOTE The system automatically verifies the software prerequisites during the Cerity NDS for Pharmaceutical QA/QC software installation.

Step 3. Verify required software

Before installing the Cerity NDS software, do these steps:

1. Check your Operating System settings, from the **Start** > **Run** command.
   - For Microsoft Windows Service Pack, enter **`winver`**. The OS Service Pack number is displayed on the first page.
   - For MDAC, enter **`regedit`**. The MDAC version is under the **HKLM\SOFTWARE\Microsoft\DataAccess\Version** key.
2. Open MS Internet Explorer, then click **Help** > **About** for the version number.

NOTE The system automatically verifies the software prerequisites during the Cerity NDS for Pharmaceutical QA/QC software installation.

Step 4. Set up DHCP Server

Do these steps only if you are installing a client/server system, and you are using DHCP.

NOTE If you use IP routers, they must support RFC 1542. Otherwise a DHCP server or a DHCP Relay agent is required on each subnet.

Please refer to Windows NT 4.0 / Windows 2000 documentation for instructions on how to install a DHCP Server or contact your company's network support personnel for more information on the advanced options.

Step 5. Set network card

Do this step on every computer on the Cerity NDS system.

1 Ask your network support personnel how to setup the computer, DHCP client or assigned static IP address.

   If you use a DHCP server, the following systems must be assigned a static IP address:

   - Domain controllers
   - Windows Internet Naming Service (WINS)
   - Domain Name Server (DNS)
   - DHCP server
   - Network printers
   - Switches
   - Routers

2 From the **Start** menu, click **Settings > Control Panel > Network > Adapters.**

3 If no network card is installed,

   a Refer to your computer's documentation for instructions to install a compatible network interface card and driver.

   b From the **Start** menu, click **Settings > Control Panel > Network and Dial Up Connections**

4 Edit the **Properties** of the configured connection (e.g Local Area Connection) and check that the TCP/IP protocol is installed.

5 If the TCP/IP protocol is not installed:

   a Click **Install**, select **Protocol,** then click **Add...**

   b Select **Internet Protocol (TCP/IP)** and click **OK**

6 Click **Internet Protocol (TCP/IP) > Properties...**

7 If you need to set this system to use DHCP:

   a Click **Obtain an IP address Automatically**.

   b Click **OK**.

   c Restart the computer.

8 If you need to assign an IP address to this system (instead of using DHCP):

   a Select **Use the following IP Address**

   b Enter the configuration information. For example, IP address and additional network information.

   c Click **OK** and restart your computer.

9 Log onto the computer and ping to verify that the network information was correctly installed. Use the computer name or IP Address of the computer.

The Cerity NDS computers will function in a DHCP environment, if the required Microsoft network infrastructure is implemented and if all instrument configurations support DHCP.

However, it's recommended to have the Cerity Database Server and Acquisition Controller's with static IP Addresses.

Note that TCP/IP internetworks require a name resolution service. The service changes computer names to IP addresses, and changes IP addresses to computer names. Check with your information systems administrator to determine which service is appropriate. A name resolution service is necessary to communicate with instruments.

Step 6. Create computer accounts in the domain

Create a domain computer account for each Cerity NDS computer. Each Cerity NDS computer must have a domain computer account before installing Oracle and the Cerity NDS software.

Please refer to Windows NT 4.0 / Windows 2000 documentation for instructions on how to create User Accounts. Contact your IT personnel if you need additional help.

Step 7. Set up an User Account for Cerity Service

In a Cerity NDS client/server environment, you create a domain user from a domain controller and add this account to the local Administrators group of each computer in the Cerity NDS client/server system.

Please refer to Windows NT 4.0 / Windows 2000 documentation for instructions on how to create User Accounts.

Add these properties for the account:

a Enter as **Username**: `ceritycomm`

b Enter as **Group**: `Administrators`

c Check **User Cannot Change Password**.

d Check **Password Never Expires**.

NOTE The name 'ceritycomm' is a recommended user name for the Cerity Service Account. The usage of this name is not mandatory.

CAUTION Do *not* check **User Must Change Password at Next Logon**.

Do *not* check **Account Disabled.**

It is critical that the Cerity Service account is not disabled within the operating system as it is required for communication within the software application.

The domain user, ceritycomm, functions as a Cerity service for communication between computers in the Cerity NDS client/server system. It must be a domain user account and it must be a member of the local Administrators group of each computer that is a Cerity NDS member in the domain.

Step 8. Install a printer

CAUTION Install printers before you install the Cerity NDS software.

To install a printer for the first time, you need to add it. This must be done for the Cerity service user account.

1. Log on to the computer as the Cerity service user, user account created for Cerity Service.
2. Click **Start > Settings > Printer > Add Printer**.
3. Enter the applicable information for which the system asks, like the type of printer, its share name, network name, or port and additional information.
4. Log off and log on as the administrator equivalent user your were logged on as in the previous steps.

NOTE A printer needs to be configured for every user including the Cerity service user account. A printer needs to be configured on each computer.

3 Install Cerity NDS Database Server or Cerity NDS Professional

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Install Cerity NDS software 50
Verify Installation 63
Customize the system 65
Synchronize timestamps among Cerity NDS machines 66

In this chapter you install the Cerity NDS Database Server, or in the case of a stand-alone installation, you install the Cerity NDS Professional system.

You must complete the steps in chapters 1 and 2 before you do the steps in this chapter.

The Cerity NDS Software files (binaries) occupy approximately 2 gigabytes of disk space for Database Server installation or Professional installation.

Step 1. Install Oracle Server

Do this step only to the Oracle Server installation intended for Cerity NDS Database Server or Cerity NDS Professional.

Install the Oracle Server Software

1. Log on as local Administrator or an administrator equivalent (e.g. As the user created for Cerity service 'ceritycomm')
2. Place the **Oracle 9i Database CD 1** into the CD-ROM drive.If the installation program does not automatically start, click **Start > Run > Browse > setup.exe**.
3. Click **Install/Deinstall Products**, then **Next**.
4. In the File Selections panel, select a destination (D:, E: or F:), and click **Next.**
5. In the Available Products panel, select **Oracle9i 9.2.0.1.0 Database**, and click **Next**.

NOTE The Oracle Database ServerDatabase Server installation transparently and automatically installs the Oracle Administrator module with tools.

6. In the Installation Types panel, select **Standard Edition (2.80GB)**, and click **Next**.
7. In the Database Configuration Screen, **Select Customized**. Then click **Next.**
8. Keep the default port value (**2030**) for the Oracle MTS Recovery Service and click **Next**.
9. When the Summary screen appears, view the settings, then click **Install**.
10. When Prompted, insert the **Oracle 9i Database CD 2** and **Oracle 9i Database CD 3**

11 When the configuration utility starts, check **Perform typical configuration,** and click **Next**.

12 In the Database Configuration Assistant Screen, click **Cancel** and click **Yes** to exit.

13 An error will be displayed because the Database Configuration Assistant step has been canceled. Click **OK.**

14 In the End of Installation panel, click **Exit**, then click **Yes** to confirm that you want to exit.

NOTE At the end of the Oracle installation, the Oracle Enterprise Manager Console is automatically started.

15 Press **Cancel** in the Add Databases to Tree panel and close the **Oracle Enterprise Manager Console**.

16 **Stop** and change the startup mode to **manual** for the following Oracle Services **OracleMTSRecoveryService, OracleOraHome92HTTPServer, OracleOraHome92ClientCache, OracleOraHome92PagingServer and the Distributed Transaction Coordinator service.**

17 Click **Start > Shutdown > Restart**.

18 Log on to the computer as Administrator or an administrator equivalent.
(e.g. As the user created for Cerity service 'ceritycomm')

19 Verify the Oracle services have been started on the computer where the Database Server resides. Then from this computer, run `TNSPING` *`hostname`* to check the connection.

Install the Oracle9i OLEDB Provider Patch

Do this step on the Oracle Server.

1. Stop all the Oracle Services:
   a. Click **Start > Settings > Control Panel > Administrative Tools > Services**.
   b. Stop all Oracle services and the **Distributed Transaction Coordinator** service.
   c. For computers running **Microsoft Windows XP Professional**, it is also necessary to DISABLE the "COM+Event System" in the Service-Manager and reboot the system before this Patch. The service will be set back to its original startup mode at the end of the patch installation
2. Place the Oracle CD-ROM, "Oracle 9i Patch Set for Networked Data Systems", Part #G4000-60105, into the CD-ROM drive.
3. Click **Start > Run** and enter *d*:\OleDB9.2.0.2\Install\Win32\setup where *d* is the letter of the CD-ROM drive, or alternatively, use the Oracle Universal Installer:
   a. Click **Start > Programs > Oracle Installation Products > Universal Installer**.
   b. Click **Next**.
   c. Under Source... Click Browse.
   d. Select the file **Products.jar** in the **OLEDB9.2.0.2\Stage** folder and click **Open** and click **Next**.

Example: *drive*:\OleDb9.2.0.2\stage\products.jar

4. When the Summary list is complete, check that **Oracle Provider for OLE DB 9.2.0.2.0** is displayed.
5. Click **Install**.
6. Click **Exit** if you see **The installation of Oracle Provider for OLE DB was successful**.
7. If you computer is running **Microsoft Windows XP Professional**, set the "COM+Event System" to its previous Startup Type (e.g. Manual) and reboot again!

   You can now shut down and restart the computer.

Install the Oracle Universal Installer patch

Do this step on the Oracle Server.

1 Stop all the Oracle Services:

   a Click **Start > Settings > Control Panel > Administrative Tools > Services**.

   b Stop all Oracle services and the **Distributed Transaction Coordinator** service.

   c For computers running **Microsoft Windows XP Professional**, it is also necessary to DISABLE the "COM+Event System" in the Service-Manager and reboot the system before this Patch. The service will be set back to its original startup mode at the end of the patch installation

2 Place the Oracle CD-ROM, "Oracle 9i Patch Set for Networked Data Systems", Part #G4000-60105, into the CD-ROM drive.

3 Click **Start > Run** and enter ***d*:\OUI2.2.0.18.0\install\win32\setup.exe** where *d* is the letter of the CD-ROM drive, or alternatively, use the Oracle Universal Installer:

   a Click **Start > Programs > Oracle Installation Products > Universal Installer**.

   b Click **Next**.

   c Under Source... Click Browse.

   d Select the file **Products.jar** in the **OUI2.2.0.18.0\Stage** folder and click **Open** and click **Next**.

Example: *drive*:\OUI2.2.0.18.0\stage\products.jar

4 In the Installation Types screen, select **Minimum (32MB)** and click **Next.**

5 When the Summary list is complete, click **Install**.

6 Click **Exit** if you see **The installation of Oracle Installation Products was successful**.

7 If you computer is running **Microsoft Windows XP Professional**, set the "COM+Event System" to its previous Startup Type (e.g. Manual) and reboot again!

You can now shut down and restart the computer.

Install the Oracle9i Patch Set 9.2.0.3.0

Do this step on the Oracle Server.

1. Stop all the Oracle Services:
   a. Click **Start > Settings > Control Panel > Administrative Tools > Services**.
   b. Stop all Oracle services and the **Distributed Transaction Coordinator** service
   c. For computers running **Microsoft Windows XP Professional**, it is also necessary to DISABLE the "COM+Event System" in the Service-Manager and reboot the system before this Patch. The service will be set back to its original startup mode at the end of the patch installation
2. Place the Oracle CD-ROM, "Oracle Patch Set for Networked Data Systems", Part #G4000-60105, into the CD-ROM drive.
3. To install the Oracle Patch Set 9.2.0.3.0, use the Oracle Universal Installer:
   a. Click **Start > Programs > Oracle Installation Products > Universal Installer**.
   b. At the **Welcome** screen, click "**About Oracle Universal Installer ...",** and verify that the version is **2.2.0.18.0.** If the version is not correct**,** see **"Install the Oracle Universal Installer patch"** on page 47**.**
   c. Click **OK** and **Next**.
   d. Under Source... Click **Browse**.
   e. Select the file **Products.jar** in *d*:\OraPatchSet2\stage\ where *d* is the letter of the CD-ROM drive. click **Open**.
4. When the Summary list is complete, check that **Oracle 9iR2 Patch Set 9.2.0.3.0** is displayed.
5. Click **Install**.

NOTE If you get an error message that Oracle services are still running, click **Cancel**. Select **Stop installation of all products** and click **OK**. Click **Exit**, then click **Yes**. Stop all running Oracle services (see step 1 above) and start again at the beginning of step 2.

6 Click **Exit** if you see **The installation of Oracle 9iR2 Patch Set was successful**. Click **Yes** to exit.

7 If you computer is running **Microsoft Windows XP Professional**, set the “COM+Event System” to its previous Startup Type (e.g. Manual) and reboot again!

You can now shut down and restart the computer.

Step 2. Install Cerity NDS software

The Cerity NDS Database Server must be installed and completely configured first on the network in a client/server model, before you install a Cerity review client or a Cerity acquisition controller.

Check that you have successfully prepared Oracle and Windows as described in the previous chapters.

A verification tool is available in the Cerity NDS CD-ROM under <CD-ROM drive>:\Support\PPICT\
The tool will verify that the Cerity NDS Application can be installed on the target computer, it can also be used after the Cerity NDS installation. Please refer to the PPICT User Guide for instructions on the tool installation and usage.

1 Log on as Administrator or an administrator equivalent. (e.g. As the user created for Cerity service 'ceritycomm')

NOTE The user must me a member of the local Administrators Group AND must be a member of the ORA_DBA group.

2 Put the Cerity NDS CD-ROM into the CD-ROM drive.

3 From the **Start** menu, click **Run > Browse > setup.exe > Open > OK**.

4 The following message displays only if the HotFix is not installed.

Following HotFix(s) from Microsoft were not detected on the system.
- Q326407
Setup will now install these HotFix(s)

If you see this message,click **OK** to continue: The HotFix will be installed.

5 Respond to the next panels:

   a In the Cerity Software Installation welcome panel, click **Next** to continue.

   b Click **Yes** after you have read and understand the licensing terms.

6 In the Setup Type panel, select **Cerity Database Server** or **Cerity Professional** and click **Next**.

CAUTION

The initial installation type cannot be changed nor migrated to another installation type, after installation. In other words, a Cerity NDS acquisition controller system cannot later be changed to a Cerity NDS review client system.

The review client may operate on the acquisition controller and Database Server, because the review client module, by default, is installed with the Cerity Database Server and the Cerity acquisition controller installation types. However, the Cerity NDS review client will not function as an acquisition controller nor Database Server, and neither the Cerity NDS acquisition controller nor Cerity NDS Database Server can be installed on to an existing Cerity NDS review client. No more than one Cerity installation type may exist on a computer. (Cerity Professional consists of all three functioning software modules: database server, review client and acquisition controller.)

7 The system will restart automatically. Log on again as the same administrator equivalent as before.

8 Respond to the next panels:

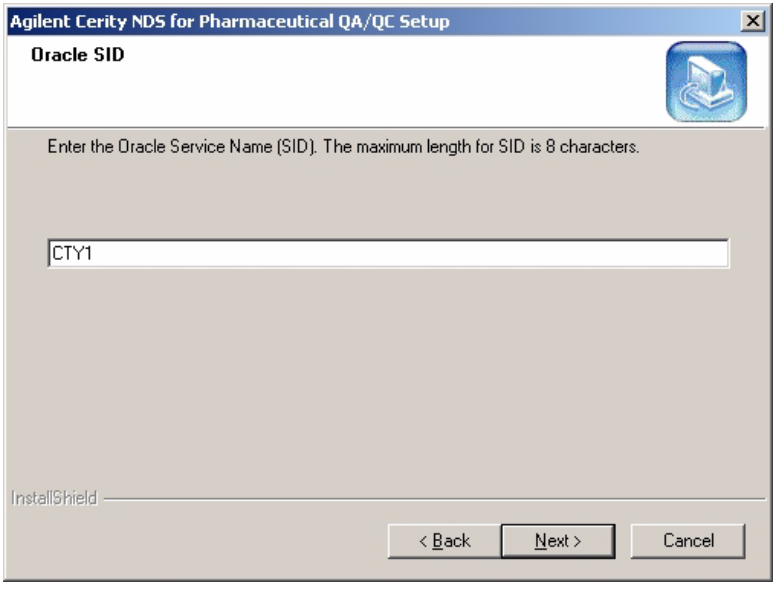
   a In Cerity NDS for Pharmaceutical QA/QC Destination panel, accept the location **C:\Agilent\Cerity** or enter a different location

NOTE

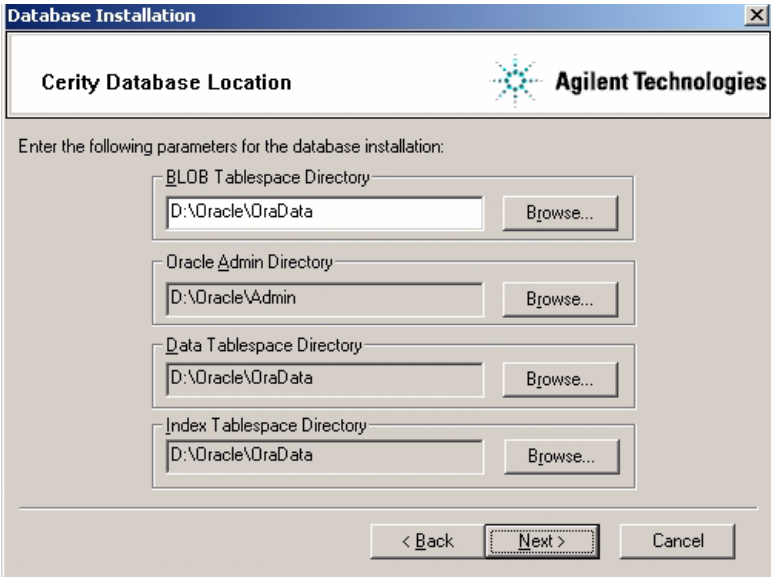
The destination path must not contain spaces nor special characters.

b In the Cerity Report Directory panel, accept the values as they are shown, or enter a different location.

c In the Oracle SID panel, enter a four character SID that represents the database service name, or accept the default, **CTY1**.


Agilent Cerity NDS for Pharmaceutical QA/QC Setup
Oracle SID
Enter the Oracle Service Name (SID). The maximum length for SID is 8 characters.
CTY1
InstallShield
< Back
Next >
Cancel

d In the Database Installation panel, accept the defaults or change the locations according to your disk capacity and the disk configuration in the computer.



NOTE If you need to change the disk locations or the installation paths, click Browse, and make the appropriate changes.

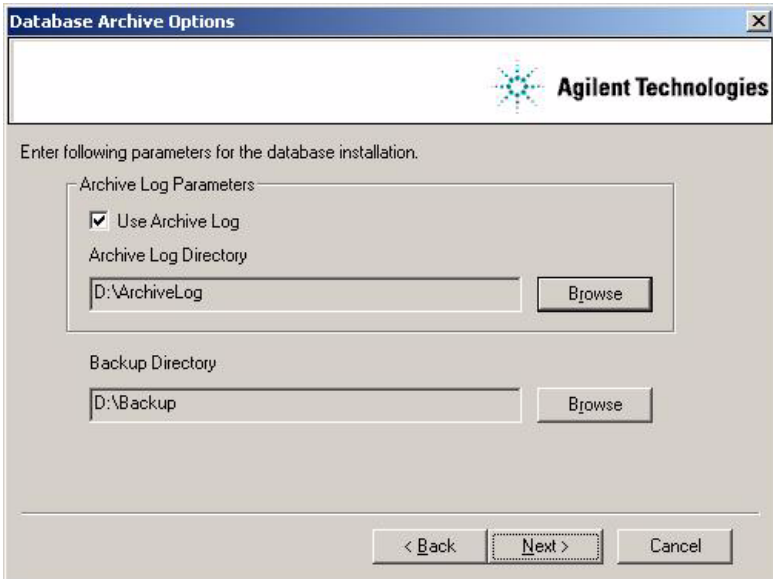
9 In Cerity Database Size screen:

- If this is a Database Server installation, select **Tiny**, **Small**, **Medium** or **Large**, according to the values that you calculated in Chapter 1, “Prepare to install”,” then click **Next**.

The preset parameters provide adequate performance and functionality for most systems. Customization is not covered in this book.

10 In the Database Archive Options Screen:

- Select **Use Archive Log** to have the Oracle database in archive log mode, then select the directory to store the Archive Redo Log files.
- Select the destination to be used as a **Backup Directory.**



11 In the Review Policy panel, select **Yes** or **No**:

- **Yes** - Strict results sign off
- **No** - Informal results sign off

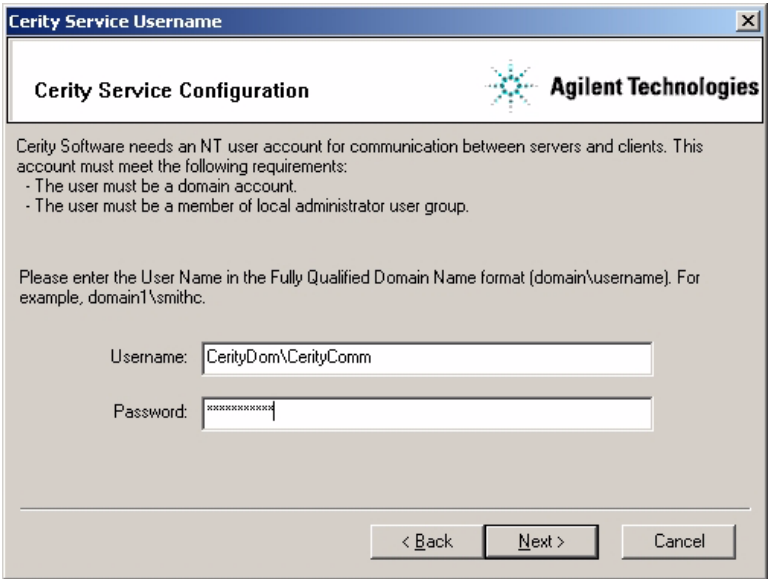
If you need the system to enforce a formal data review and sign-off process, a technical control according to 21 CFR Part 11 which enforces the permitted sequence of steps for review of electronic data, then select Yes.

If you choose this option, the system enforces a formal three-level result sign-off process from independent reviewers with appropriate capabilities (analyst review, peer review, manager approval).

If your laboratory procedures do not require a strict results sign-off enforced by the data system, select No.

CAUTION Strict review policy requires a database to be generated in strict results/approval mode. Once installed, the strict review policy cannot be disabled.

12 In the Cerity Service Configuration screen, enter the user account created earlier for communication (Cerity service):


Cerity Service Username
Cerity Service Configuration
Agilent Technologies
Cerity Software needs an NT user account for communication between servers and clients. This account must meet the following requirements:
- The user must be a domain account.
- The user must be a member of local administrator user group.
Please enter the User Name in the Fully Qualified Domain Name format (domain\username). For example, domain1\smithc.
Username:
CerityDom\CerityComm
Password:
< Back
Next >
Cancel

- For Cerity NDS Database Server installation, enter *domain_name**domain_username*
- For Cerity NDS Professional installation, where the computer and user are not domain members, enter *computer_name**local_username*.

  Otherwise, enter *domain name**domain_username*.

If you do not know the computer name, click **Start > Settings > Control Panel > Network > Identification**. The *domain username* and *local username* are the account created for Cerity service communication in "Set up an User Account for Cerity Service" on page 41. *domain_name* is the name of the domain that the Cerity NDS service account is a member.

13 Enter the password for that user name and click **Next**.

CAUTION

It is *not recommended to* use Cerity service account for routine operation of Cerity software.
You must have logged on once, before the installation of Cerity NDS software, just to verify login capability for this account, and you must have installed a printer.
It is critical that the Cerity service account is not disabled within the operating system as it is required for communication within the software application.

14 In the BOOTP Server Configuration screen, select an option.

You may configure BOOTP Server after a successful Cerity installation or during this installation.

If you select **Configure BOOTP Server** in this panel, the configuration panel appears after the database initialization.

You only need to configure BOOTP Server if you have no other way of assigning an IP address to the instrument, such as through DHCP. Typically, BootP Server is used on a Cerity NDS client/server system where DHCP server services are not available to Cerity computers nor instruments.

15 Respond to the next panels:

a In the Select Program Folder panel, accept the default or enter a preference. Then click **Next**.

b In the Check Setup Information screen, check the configuration information you selected or entered. Click **Next** to continue, or **Back** to make changes.

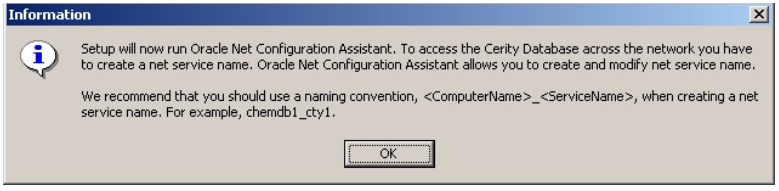
In the Installing Cerity Software screen, user interaction is not required. However, to toggle between **Setup Status** and **Check Setup Information** panel, use **Alt-Tab**. This can take several minutes to complete.

c Click **Next** when it is available again. The **Next** button is not available while the system creates the database. When the database is successfully created, the Cerity Database Creation Panel window displays **DBMK INSTALLATION SUCCESSFUL.**

d Click **Yes** to view the log file, or **No** to continue. Check the log file if the Cerity Database Creation panel does not indicate a successful installation. By default, the file is located at **<x:>\Agilent\Cerity\Common\Database\dbmak\dbmak_cer**

e If you see **Loading Oracle Net Configuration Assistant program. Please Wait**, but the program does not appear, then open the Windows Task Manager, and enter `launch.exe`.

f Read this Information screen, and make note of the naming convention for the "Net Service Name," then click **OK**.


Information
Setup will now run Oracle Net Configuration Assistant. To access the Cerity Database across the network you have to create a net service name. Oracle Net Configuration Assistant allows you to create and modify net service name.
We recommend that you should use a naming convention, <ComputerName>_<ServiceName>, when creating a net service name. For example, chemdb1_cty1.
OK

CAUTION If you see an error message when you do the next step, refer to Chapter 8, "Troubleshooting"."

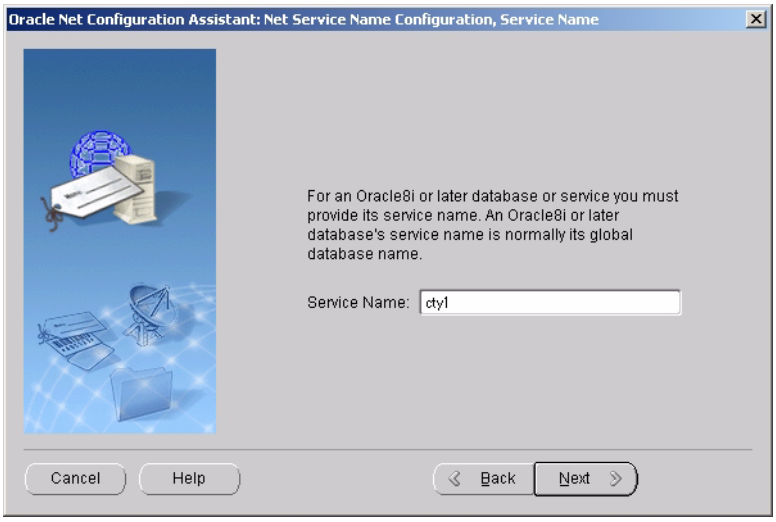
16 In the Oracle Net Configuration Assistant utility:

a Select **Local Net Service Name configuration**.

b Select **Add** and click **Next** in the Net Service Name Configuration panel.

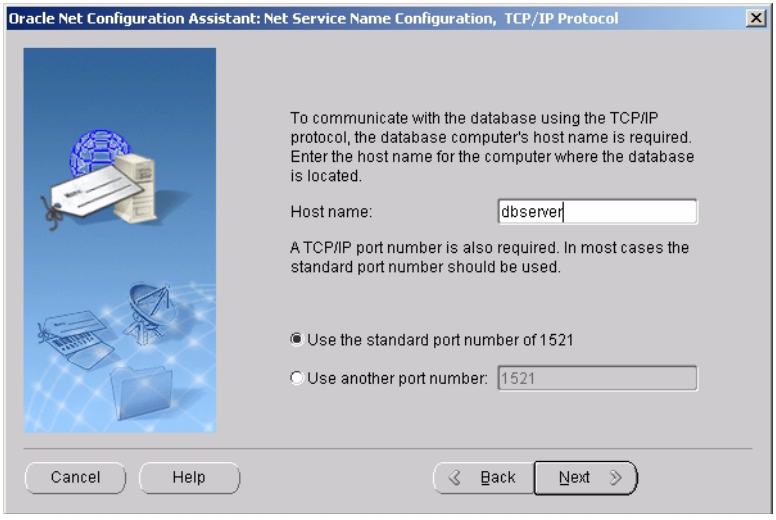
17 Select **Oracle8i database or service** in the Net Service Name Configuration panel.

c Enter the database SID (Service Name) in Net Service Name Configuration, Service Name panel.


Oracle Net Configuration Assistant: Net Service Name Configuration, Service Name
For an Oracle8i or later database or service you must provide its service name. An Oracle8i or later database's service name is normally its global database name.
Service Name:
cty1
Cancel
Help
Back
Next

d Select **TCP** in the Net Service Name Configuration, Select Protocols panel.

e In the Net Service Name Configuration, TCP/IP Protocol panel, enter as the **Hostname** the computer name where the Cerity NDS database is. Do not change standard port number 1521.


Oracle Net Configuration Assistant: Net Service Name Configuration, TCP/IP Protocol
To communicate with the database using the TCP/IP protocol, the database computer's host name is required. Enter the host name for the computer where the database is located.
Host name:
dbserver
A TCP/IP port number is also required. In most cases the standard port number should be used.
Use the standard port number of 1521
Use another port number:
1521
Cancel
Help
Back
Next

f Select **Yes, perform a test** in the Net Service Name Configuration, Test panel.

In this panel, you are warned that the test did not succeed. This is expected.

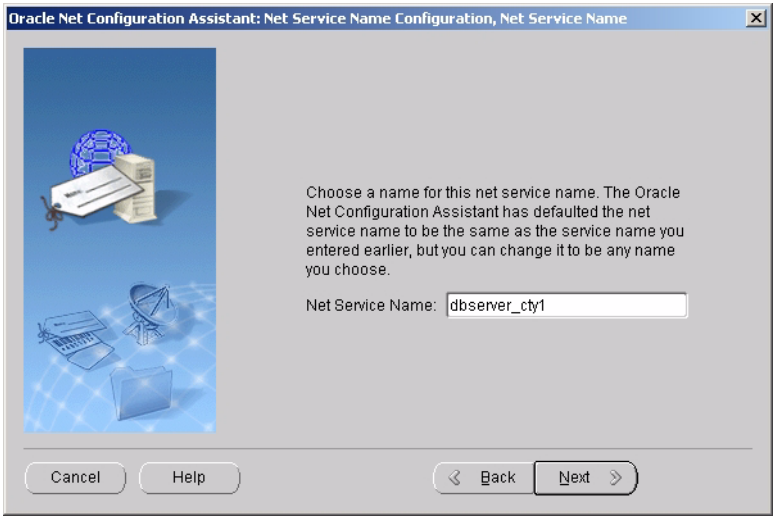
g Click **Change Login**.

h In the Change Login panel, enter `cagdbadmin` for the Username and `hp` (case-sensitive) as the password. Click **OK**.

CAUTION Change this password after all Cerity NDS computers have Cerity NDS software installed and configured.

i If the test succeeds, click **Next**.

j Enter a **Net Service Name**. Use the name format suggested in a previous panel.


Oracle Net Configuration Assistant: Net Service Name Configuration, Net Service Name
Choose a name for this net service name. The Oracle Net Configuration Assistant has defaulted the net service name to be the same as the service name you entered earlier, but you can change it to be any name you choose.
Net Service Name:
dbserver_cty1
Cancel
Help
Back
Next

k Select **No** in the Net Service Name Configuration, Another Net Service Name? panel.

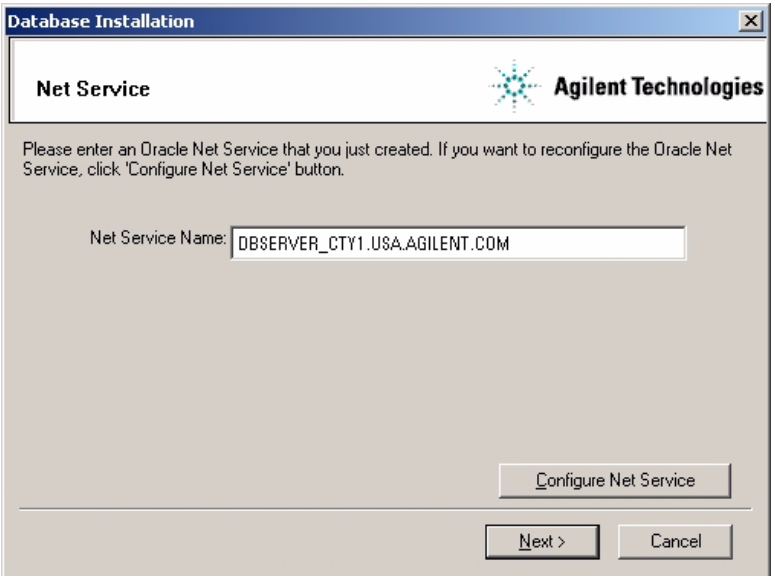
l Click **Next** when you see **Net service name Configuration Complete!**

m Click **Finish** in the Net Service Name Configuration, Welcome panel.

n Enter the **Net Service Name** and click **Next**.

If you need to verify the Net Service Name, open the files **tnsnames.ora** and **sqlnet.ora** located by default at **<x:>\oracle\ora92\network\Admin**.

Some network environments require the FQDN to represent the Net Service as displayed in the panel below. However, first try the Net Service Name, `ComputerName_ServiceName.` Then try the FQDN.


Database Installation
Net Service
Agilent Technologies
Please enter an Oracle Net Service that you just created. If you want to reconfigure the Oracle Net Service, click 'Configure Net Service' button.
Net Service Name:
DBSERVER_CTY1.USA.AGILENT.COM
Configure Net Service
Next >
Cancel

NOTE If in this panel the mouse and keyboard do not respond, the Oracle Net Configuration Assistant did not close properly. Open Task Manager, select **Processes > Launch.exe > End Process**. If necessary, toggle (Alt-Tab) back to the Database Installation, Net Service panel to continue.

18 Click **Next** to accept the preset value, `Cerity for Pharma QA-QC`, as the **Database Friendly Name**, unless your requirements specify a different Friendly Name.

19 If you chose to configure Cerity BOOTP Service Global settings:

- Enter as the **Gateway** the router IP address only if a router is between a BootP Server and the instrument.
- Enter the **Subnet Mask** of the Gateway IP address.
- Change the path of the **Bootptab File Location**: and **Bootplog File Location** only if you need to.
- Click **OK**, then **Finish** to restart the computer.
- Enable the Cerity BOOTP Service. Refer to the online System Administration Help.

20 In the last panel, where the Finish button is displayed, read and note the important information on this panel.

21 Select **View Readme.txt file?**, then click **Finish**.

22 After you close the **Readme.txt** file, click **OK** to finish the software installation.

Step 3. Verify Installation

1 Verify Service installation:

   a From the **Start** menu, click **Control Panel > Services**.

   b Check that for Cerity NDS Database Server and for Cerity NDS Professional installation, the services listed in Table 13 are present and correctly configured.

Table 13 Service names and configuration

Service Name	Startup Type	Log On As
• Agilent Event Distributor	Automatic	LocalSystem
• Cerity Automation Engine	Manual	Cerity Service Account
• Cerity Bootp Service	Manual	LocalSystem
• Cerity GNSFwdrService	Manual	LocalSystem
• Cerity Lab Network	Manual	Cerity Service Account
• CerityReportSpooler	Manual	Cerity Service Account
• CeritySecurity	Manual	LocalSystem
• Distributed Transaction Coordinator	Manual	LocalSystem
• OracleMTSRecoveryService	Manual	LocalSystem
• OracleOraHome92Agent	Automatic	LocalSystem
• OracleOraHome92ClientCache	Manual	LocalSystem
• OracleOraHome92HTTPServer	Manual	LocalSystem
• OracleOraHome92PagingServer	Manual	LocalSystem
• OracleOraHome92SNMPPeerEncapsulator	Manual	LocalSystem
• OracleOraHome92SNMPPeerMasterAgent	Manual	LocalSystem
• OracleOraHome92TNSListener	Automatic	LocalSystem
• OracleService<SID> (<SID> is entered in Step2 point 8c)	Automatic	LocalSystem

NOTE

OracleOraHome92Agent, OracleMTSRecoveryService, OracleOraHome92HTTPServer, OracleOraHome92ClientCache, OracleOraHome92PagingServer and Distributed Transaction Coordinator are Oracle services that do not need to be started on the Cerity NDS Database Server and Cerity NDS Professional. The startup mode for these services is manual.

Some service names might differ from this example, depending on the parameters you entered during installation.

2 Verify the database connection

a From the **Start** menu, click **Start > Programs > Agilent Cerity > Cerity Software Administration.**

b Log in as the user you used to install the software, and use the right mouse button to click **Cerity Software Administration** in the Console Root tree.

c Select **Add Database**.

d Enter the *Hostname\Computername* where the Cerity NDS Database Server is installed. Click **OK**.

e Expand the database friendly name to verify that the connections and services are active.

Step 4. Customize the system

In this step, you complete the installation of your Cerity NDS system.

1. Log onto the computer as the administrator you used to install the Cerity software.
2. Click **Start > Agilent Cerity > System Administration Help**.
3. In the Contents panel, click **Getting Started with the Cerity Administration Software application**.
4. Follow the instruction to finish the installation.

The online instructions in the Cerity Software Administration utility help you to add users, instruments, licenses, and do other post-installation administration tasks.

Step 5. Synchronize timestamps among Cerity NDS machines

In this step you synchronize your Cerity clients, server, and instruments.

This step is necessary to maintain consistent timestamps among the Cerity cluster computers and data.

1. Identify a time server in your Cerity domain. This is a server with which you will synchronize Cerity cluster computers so that their timestamps match.
2. Log on as Administrator on the time server. The time server must be a primary domain controller (PDC) or a backup domain controller (BDC).
3. Configure the time server.
   a. Select **Start** > **Run** and enter `Regedit`.
   b. Go to the following directory: **HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\LanManServer\Parameters**
   c. Select **Edit** > **New** > **DWORD Value**.
   d. Enter `TimeSource` as the name of the value.
   e. Set **TimeSource** to `1`.
4. Create a batch file.
   a. Select **Start > Run** and enter `Notepad`.
   b. Type
   `NET TIME [\\<computername>] [/SET] [/YES]`
   where <computername> is the name of the time server computer.
   c. Save the file as `\agilent\timesynch.bat`.
5. Copy **Agilent\timesynch.bat** to the Agilent directory on each computer in the cluster (Acquisition Controller, Review Client, Database Server) unless it is the designated time server.

6 Run **timesynch.bat** to synchronize and set the initial time to the designated time server.

7 Schedule timesynch.bat.

Perform this procedure on all Cerity cluster computers, except for the designated time server.

a From the desktop, open **My Computer**.

b Open **Scheduled Tasks**.

c Double-click **Add Scheduled Task**.

d Click **Next**.

e Click **Browse**.

f Select **\Agilent\timesynch.bat**.

g Click **Open**.

h Select **Daily** and click **Next**.

i Enter the desired start time in the Start time combo box.

j Under **Perform this task**, select **Every Day**.

k Select a start date in the Start date field, and click **Next**.

l Enter `<computername>\Administrator` or `<domainname>\Administrator`.

m Enter and confirm the password for the user account you entered, and click **Next**.

n Click **Finish**.

8 To audit the success or failure of the time synchronization task:

This step is optional. If you decide to complete this step, you must clear the log file on a regular basis.

a Open **Scheduled Tasks**.

b Select **timesynch**.

c Click the **Advanced** tab.

d Select **Notify Me of Missed Tasks**.

e Select **File > Properties**.

f Select **Security > Auditing**.

g Click **Add**.

h Select **Administrators**.

i Mark the **Execute Success and Failure** check box.

To view audit events, select **Advanced > View Log** in the **Scheduled Tasks** dialog box.

NOTE

Make sure you clear the logged events at regular intervals so that the log file does not get too large.

To clear the log file, select and delete its contents. If desired, copy the contents into a different file before you delete them.

Step 6. Moving Reports to a different location

Do the following steps if after the installation you want to move the reports directory to a different location.

1. Stop all services on Cerity NDS Database Server or on the Cerity NDS Professional using **HPCSSTATUS**
2. Move the current report directory to the new location.
3. Share the new report directory as **CerityReports.**
4. If needed, change the directory and share permissions to
   Everyone **Read**
   Cerity Service Account (e.g. CerityComm) **Full**
5. Change the registry entry HKEY_LOCAL_MACHINE\Software\Agilent\Cerity\Reports\ReportShare to the new loaction
6. Restart the services using HPCSSTATUS

4
Install Cerity Review Client, Acquisition Controller and Reprocessing Server

Install Oracle Client 72
Install Cerity NDS software 80
Verify the Installation 88
Customize the system 90

In this chapter you install software for the Cerity review client, Cerity acquisition controller, and Cerity reprocessing server.

You must complete the steps in chapters 1 and 2 before you do the steps in this chapter.

In a client/server system the database server, acquisition controller, the review client, and the reprocessing server are installed on different computers.

The review client, acquisition controller and reprocessing server system files each occupy approximately 1 gigabyte of disk space.

If you specify a destination drive with less than the required free space, the installation program gives you a warning and stops the installation. You can cancel the installation at anytime by clicking **Cancel**.

CAUTION Do not use Add/Remove Programs to install Cerity NDS software.

Step 1. Install Oracle Client

This installation is performed on a Microsoft Windows 2000 Professional or Microsoft Windows XP Professional computer intended to be in a Cerity NDS client/server environment. Domain membership is essential. The Cerity NDS database server installation and configuration must be completed before you begin this installation. The Cerity NDS database server must also be online and operational.

1 Prepare to install the software:
Verify the Oracle services have been started, on the computer where the database server resides.

NOTE OracleOraHome92Agent,OracleMTSRecoveryService, OracleOraHome92HTTPServer, OracleOraHome92ClientCache, OracleOraHome92PagingServer and Distributed Transaction Coordinator are Oracle services that do not need to be started on the Cerity NDS database server system. The startup mode for these services is manual.

2 A verification tool is available in the Cerity NDS CD-ROM under <CD-ROM drive>:\Support\PPICT\
The tool will verify that the Cerity NDS Application can be installed on the target computer, it can also be used after the Cerity NDS installation. Please refer to the PPICT User Guide for instructions on the tool installation and usage.

3 Log on as local Administrator or an administrator equivalent (e.g. As the user created for Cerity service ‘ceritycomm’)

4 Place the Oracle 9i Client CD into the CD-ROM drive.

If the installation program does not automatically start, click **Start > Run > Browse > setup.exe**.

5 Click **Install/Deinstall Products**, then **Next**.

6 In the File Selections panel, select a destination (D: E: or F:) other than the disk or partition where the operating system is. Keep the original path, \oracle\ora92.

7 In the Installation Types select **Custom** and click **Next**

8 In the Available Product Components screen, select the following components:

- Oracle Network Utilities 9.2.0.1.0
- SQL*Plus 9.2.0.1.0
- Oracle Windows Interfaces 9.2.0.1.0
- Oracle Universal Installer 2.2.0.12.0
- Oracle Database Utilities 9.2.0.1.0

Then click **Next**

Select the Administrator installation type on only a few strategically located clients in the client/server environment where you want the ability to administer the Oracle database remotely.

9 In the Components Location screen, click **Next.**

10 Keep the default port value (**2030**) for the Oracle MTS Recovery Service and click **Next**.

11 In the Summary panel, click **Install**.

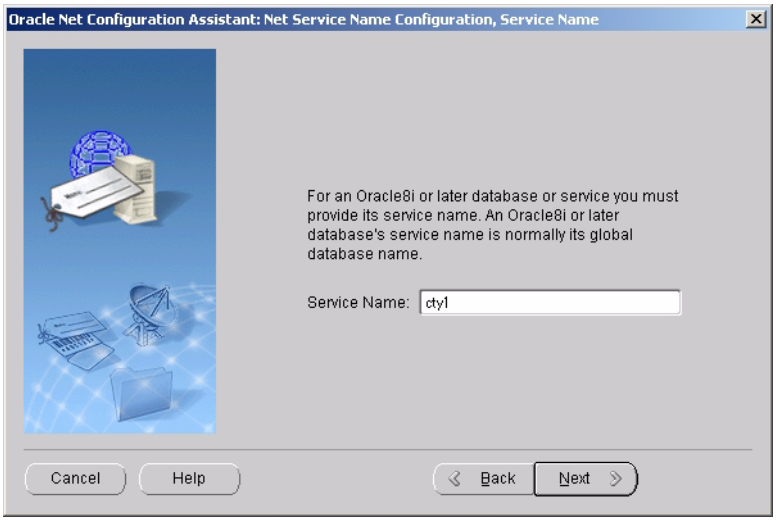
12 In the Oracle Net Configuration Assistant utility:

a Check **Perform typical configuration**.

b Select **No, I will create net service names myself. I would like to create the first one now**.

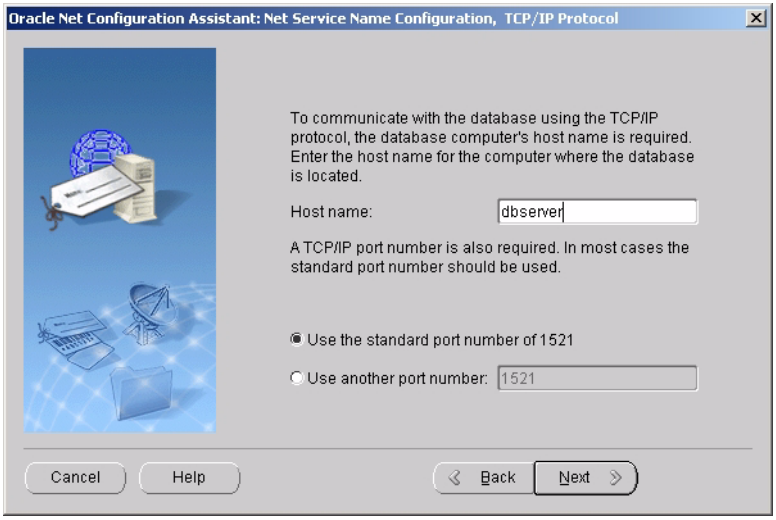
c Select **Oracle8i database or service**.

d Enter the service name that was created during the Cerity NDS database server installation. (For example, `cty1`.)


Oracle Net Configuration Assistant: Net Service Name Configuration, Service Name
For an Oracle8i or later database or service you must provide its service name. An Oracle8i or later database's service name is normally its global database name.
Service Name: cty1
Cancel
Help
Back
Next

e Select **TCP**. Check that the selection appears in blue. Click **Next.**

f For **Host Name**, enter the name of the computer on which Oracle database server and Cerity NDS database server is installed. Select **Use the standard port number**. Click **Next.**


Oracle Net Configuration Assistant: Net Service Name Configuration, TCP/IP Protocol
To communicate with the database using the TCP/IP protocol, the database computer's host name is required. Enter the host name for the computer where the database is located.
Host name: dbserver
A TCP/IP port number is also required. In most cases the standard port number should be used.
Use the standard port number of 1521
Use another port number: 1521
Cancel
Help
Back
Next

g Select **Yes, perform a test**.

h Click **Change Login**.

In this panel, you are warned that logon is denied due to invalid username or password. This is expected.

i In the **Change Login** panel, enter the username `cagdbadmin` and the password `hp` (case-sensitive). Click **OK**.

NOTE Refer to the online help for the Cerity NDS Software Administration application to change this user's password, after installation of Cerity NDS software on all Cerity NDS computers.

j If the connection test is successful, click **Next**. Otherwise, refer to Chapter 8, “Troubleshooting”.

k Enter a **Net Service Name**. Use the same naming convention for Net Service Name as you used for the Cerity NDS database server Net Service Name. For example, *ComputerName_ServiceName* (dbserver_cty1).

l Do not configure another Net Service Name.

m At the end of the Net Service Name configuration, click **Next**, then **Finish**.

13 In the End of Installation panel, click **Exit**.

14 Click **Yes** to confirm that you want to exit.

15 Click **Start > Shutdown > Restart**.

16 Log onto the computer as Administrator or an administrator equivalent. (e.g. As the user created for Cerity service ‘ceritycomm’)

17 Verify the Oracle services have been started on the computer where the database server resides. Then from this computer, run `TNSPING net_service_name` to check the connection.

Install the Oracle9i OLEDB Provider Patch

Do this step on the Oracle Client.

1. Stop all the Oracle Services:
   a. Click **Start > Settings > Control Panel > Administrative Tools > Services**.
   b. Stop all Oracle services and the **Distributed Transaction Coordinator** service.
   c. For computers running **Microsoft Windows XP Professional**, it is also necessary to DISABLE the "COM+Event System" in the Service-Manager and reboot the system before this Patch. The service will be set back to its original startup mode at the end of the patch installation
2. Place the Oracle CD-ROM, "Oracle 9i Patch Set for Networked Data Systems", Part #G4000-60105, into the CD-ROM drive.
3. Click **Start > Run** and enter *d*:\OleDB9.2.0.2\Install\Win32\ setup where *d* is the letter of the CD-ROM drive, or alternatively, use the Oracle Universal Installer:
   a. Click **Start > Programs > Oracle Installation Products > Universal Installer**.
   b. Click **Next**.
   c. Under Source... Click Browse.
   d. Select the file **Products.jar** in the **OLEDB9.2.0.2\Stage** folder and click **Open** and click **Next**.

Example: *drive*:\OleDb9.2.0.2\stage\products.jar

4. When the Summary list is complete, check that **Oracle Provider for OLE DB 9.2.0.2.0** is displayed.
5. Click **Install**.
6. Click **Exit** if you see **The installation of Oracle Provider for OLE DB was successful**.
7. If you computer is running **Microsoft Windows XP Professional**, set the "COM+Event System" to its previous Startup Type (e.g. Manual) and reboot again!

   You can now shut down and restart the computer.

Install the Oracle Universal Installer patch

Do this step on the Oracle Client.

1 Stop all the Oracle Services:

   a Click **Start > Settings > Control Panel > Administrative Tools > Services**.

   b Stop all Oracle services and the **Distributed Transaction Coordinator** service.

   c For computers running **Microsoft Windows XP Professional**, it is also necessary to DISABLE the "COM+Event System" in the Service-Manager and reboot the system before this Patch. The service will be set back to its original startup mode at the end of the patch installation

2 Place the Oracle CD-ROM, "Oracle 9i Patch Set for Networked Data Systems", Part #G4000-60105, into the CD-ROM drive.

3 Click **Start > Run** and enter ***d*:\OUI2.2.0.18.0\install\win32\setup.exe** where *d* is the letter of the CD-ROM drive, or alternatively, use the Oracle Universal Installer:

   a Click **Start > Programs > Oracle Installation Products > Universal Installer**.

   b Click **Next**.

   c Under Source... Click Browse.

   d Select the file **Products.jar** in the **OUI2.2.0.18.0\Stage** folder and click **Open** and click **Next**.

Example: *drive*:\OUI2.2.0.18.0\stage\products.jar

4 In the Installation Types screen, select **Minimum (32MB)** and click **Next.**

5 When the Summary list is complete, click **Install**.

6 Click **Exit** if you see **The installation of Oracle Installation Products was successful**.

7 If you computer is running **Microsoft Windows XP Professional**, set the "COM+Event System" to its previous Startup Type (e.g. Manual) and reboot again!

You can now shut down and restart the computer.

Install the Oracle9i Patch Set 9.2.0.3.0

Do this step on the Oracle Client.

1. Stop all the Oracle Services:
   a. Click **Start > Settings > Control Panel > Administrative Tools > Services**.
   b. Stop all Oracle services and the **Distributed Transaction Coordinator** service.
   c. For computers running **Microsoft Windows XP Professional**, it is also necessary to DISABLE the "COM+Event System" in the Service-Manager and reboot the system before this Patch. The service will be set back to its original startup mode at the end of the patch installation
2. Place the Oracle CD-ROM, "Oracle Patch Set for Networked Data Systems", Part # G4000-60105, into the CD-ROM drive.
3. To install the Oracle Patch Set 9.2.0.3.0, use the Oracle Universal Installer:
   a. Click **Start > Programs > Oracle Installation Products > Universal Installer**.
   b. At the **Welcome** screen, click "**About Oracle Universal Installer...",** and verify that the version is **2.2.0.18.0.** If the version is not correct**,** see **"Install the Oracle Universal Installer patch"** on page 77**.**
   c. Click **OK** and **Next**.
   d. Under Source... Click **Browse**.
   e. Select the file **Products.jar** in *d*:\OraPatchSet2\stage\ where *d* is the letter of the CD-ROM drive. click **Open**.
4. When the Summary list is complete, check that **Oracle 9iR2 Patch Set 9.2.0.3.0** is displayed.
5. Click **Install**.

NOTE If you get an error message that Oracle services are still running, click **Cancel**. Select **Stop installation of all products** and click **OK**. Click **Exit**, then click **Yes**. Stop all running Oracle services (see step 1 above) and start again at the beginning of step 2.

6 Click **Exit** if you see **The installation of Oracle 9iR2 Patch Set was successful**. Click **Yes** to exit.

7 If you computer is running **Microsoft Windows XP Professional**, set the “COM+Event System” to its previous Startup Type (e.g. Manual) and reboot again!

You can now shut down and restart the computer.

Step 2. Install Cerity NDS software

1 Prepare to install software:

- **a** Check that the Cerity NDS database server is installed and configured.
- **b** Check that the computer is connected to the LAN.
- **c** Check that communication between the Domain Controller and the Cerity NDS database server exists.
- **d** Open the files **tnsnames.ora** and **sqlnet.ora** files in ***drive*:\oracle\ora92\network\admin** to check the Net Service Name.
- **e** Run TNSPING to the *Net Service Name*.

NOTE You can only run TNSPING from a computer with Oracle installed and configured with Oracle Net Configuration Assistant.

- **f** A verification tool is available in the Cerity NDS CD-ROM under <CD-ROM drive>:\Support\PPICT\
  The tool will verify that the Cerity NDS Application can be installed on the target computer, it can also be used after the Cerity NDS installation. Please refer to the PPICT User Guide for instructions on the tool installation and usage.

2 Log onto the computer as the Administrator or administrator equivalent user account that you used to install the other installation types.

3 Put the Cerity NDS for Pharmaceutical QA/QC CD-ROM into the CD-ROM drive.

4 From the **Start** menus, click **Run > Browse > setup.exe > Open > OK.**

5 The following message displays only if the HotFix is not installed.

Following HotFix(s) from Microsoft were not detected on the system.
- Q326407
Setup will now install these HotFix(s)

If you see this message, click **OK** to continue: The HotFix will be installed.

6 Respond to the next panels:

a In the Cerity Software Installation welcome panel, click **Next** to continue.

b Click **Yes** after you have read and understand the licensing terms.

7 In the Setup Type panel, select **Select Cerity Acquisition Controller** for acquisition controller or reprocessing server, or **Cerity Review Client** and click **Next**.

For the installation types in this section, the Cerity BOOTP Service is transparently and automatically installed.

CAUTION The initial installation type cannot be changed nor migrated to another installation type, after installation. In other words, a Cerity NDS acquisition controller system cannot later be changed to a Cerity NDS review client system.

The review client may operate on the acquisition controller and database server, because the review client module, by default, is installed with the Cerity database server and the Cerity acquisition controller installation types. However, the Cerity NDS review client will not function as an acquisition controller nor database server, and neither the Cerity NDS acquisition controller nor Cerity NDS database server can be installed on to an existing Cerity NDS review client. No more than one Cerity installation type may exist on a computer.

8 If you selected Cerity Review Client:

a Click **OK** to restart the computer.

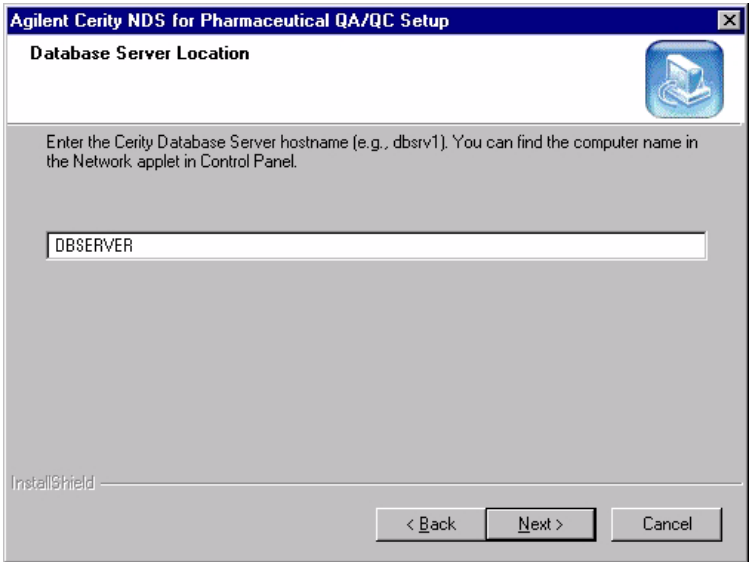
b Log on as the user that you previously logged on as when you started the installation.

9 Respond to the panels as they appear:

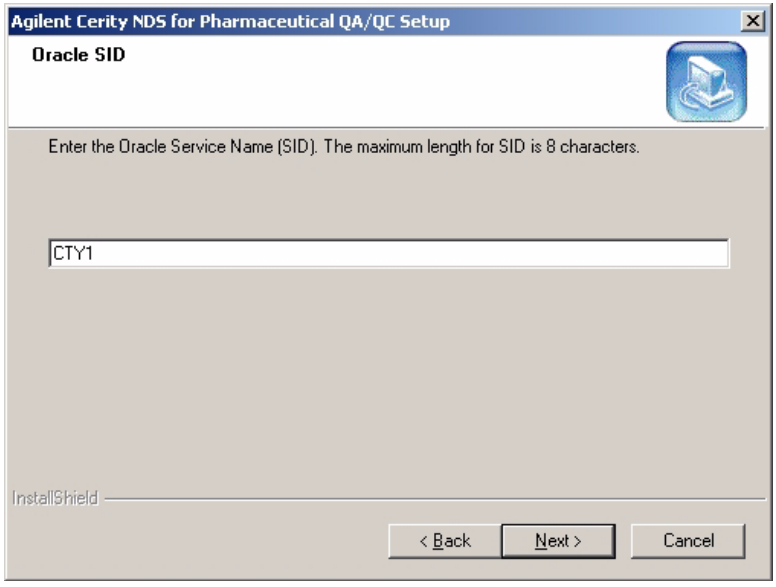
a Click **Next** in the Cerity NDS for Pharmaceutical QA/QC Destination panel to accept the location C:\Agilent\Cerity.

The destination path must not contain spaces nor special characters.

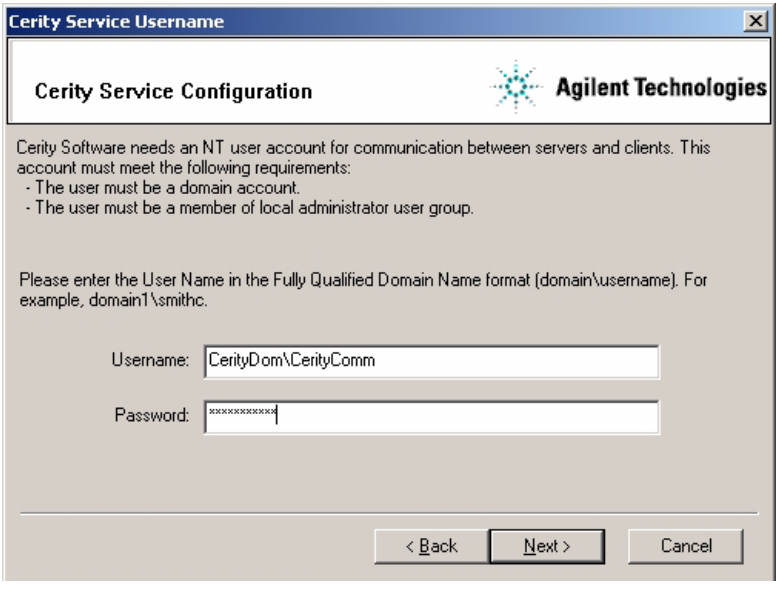
b Enter the computer name of the Cerity NDS database server in the Database Server Location panel.


Agilent Cerity NDS for Pharmaceutical QA/QC Setup
Database Server Location
Enter the Cerity Database Server hostname (e.g., dbsrv1). You can find the computer name in the Network applet in Control Panel.
DBSERVER
InstallShield
< Back
Next >
Cancel

c Enter the four character SID representing the database created on the Cerity NDS database server in the Oracle Database panel.


Agilent Cerity NDS for Pharmaceutical QA/QC Setup
Oracle SID
Enter the Oracle Service Name (SID). The maximum length for SID is 8 characters.
CTY1
InstallShield
< Back
Next >
Cancel

d In the Cerity Service Configuration screen, enter `domain name\domain username`


Cerity Service Username
Cerity Service Configuration
Agilent Technologies
Cerity Software needs an NT user account for communication between servers and clients. This account must meet the following requirements:
- The user must be a domain account.
- The user must be a member of local administrator user group.
Please enter the User Name in the Fully Qualified Domain Name format (domain\username). For example, domain1\smithc.
Username:
CerityDom\CerityComm
Password:
< Back
Next >
Cancel

The *domain name* is the name of the domain in the client/server (Cerity NDS system) environment. *domain username* is the domain account created for Cerity service communication in "Set up an User Account for Cerity Service" on page 41.

e In the Select Program Folder panel, accept the default or enter a preference. Then click **Next**.

f In the Check Setup Information screen, check the configuration information you selected or entered. Click **Next** to continue, or **Back** to make changes.

g Read this Information screen then click **OK**.

h If the installation program shows '**Loading Oracle Net Configuration Assistant Program. Please Wait**' but the program does not appear, open the Windows Task Manager, and end the 'launch.exe' process in the Process list.

10 In the Oracle Net Configuration Assistant utility:

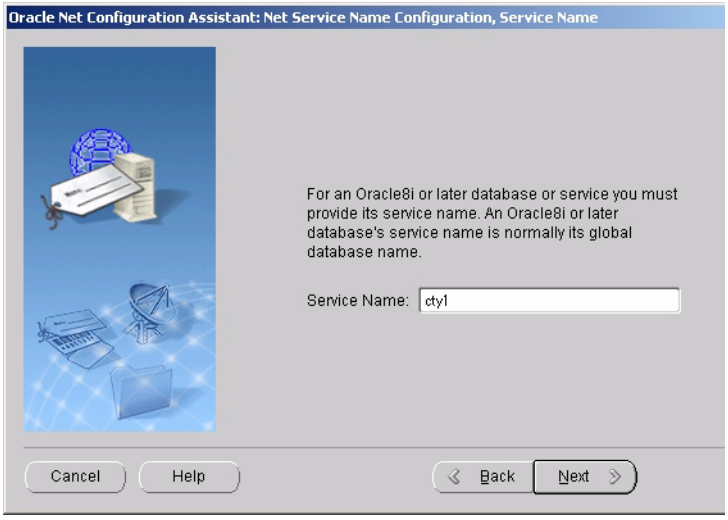
a Select **Local Net Service Name configuration**.

b Select **Add** and click **Next** in the Net Service Name Configuration panel.

CAUTION The Net Service name on a review client and acquisition controller system must match the Net Service name on a database server computer.

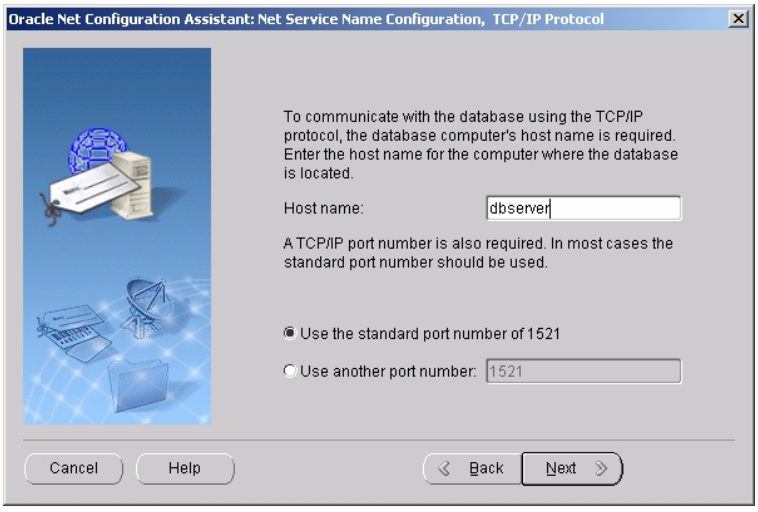
c Select **Oracle8i database or service** in the Net Service Name Configuration panel.

d Enter the database SID (Service Name) in Net Service Name Configuration, Service Name panel.


Oracle Net Configuration Assistant: Net Service Name Configuration, Service Name
For an Oracle8i or later database or service you must provide its service name. An Oracle8i or later database's service name is normally its global database name.
Service Name:
cty1
Cancel
Help
Back
Next

e Select **TCP** in the Net Service Name Configuration, Select Protocols panel.

f In the Net Service Name Configuration, TCP/IP Protocol panel, enter as the **Hostname** the computer name where the Cerity NDS database is. Do not change standard port number 1521.


Oracle Net Configuration Assistant: Net Service Name Configuration, TCP/IP Protocol
To communicate with the database using the TCP/IP protocol, the database computer's host name is required. Enter the host name for the computer where the database is located.
Host name:
dbserver
A TCP/IP port number is also required. In most cases the standard port number should be used.
Use the standard port number of 1521
Use another port number:
1521
Cancel
Help
Back
Next

g Select **Yes, perform a test** in the Net Service Name Configuration, Test panel.

In this panel, you are warned that the test did not succeed. This is expected.

h Click **Change Login**.

i In the Change Login panel, enter `cagdbadmin` for the Username and `hp` (case-sensitive) as the password. Click **OK**.

CAUTION Change this password after all Cerity NDS computers have Cerity NDS software installed and configured.

j If the test succeeds, click **Next**. Otherwise, do not cancel nor exit. Refer to the Installation Troubleshooting section in this guide.

k Enter the verified **Net Service Name** that you used in "Install Cerity NDS software" on page 80.

l Select **No** in the Net Service Name Configuration, Another Net Service Name? panel.

m Click Next when you see **Net service name Configuration Complete!**

n Click **Finish** in the Net Service Name Configuration, Welcome panel.

11 In the Net Services panel, enter the verified Net Service Name that you entered in the previous step, then click Next.

If you need to verify the Net Service Name, open the files **tnsnames.ora** and **sqlnet.ora** located by default at **<x:>\oracle\ora92\network\Admin**.

Note that some network environments require a FQDN such as ceritypdc_cty1.usa.agilent.com to represent the Net Service.

NOTE If in this panel the mouse and keyboard do not respond, the Oracle Net Configuration Assistant Program did not close properly. Open Task Manager, select **Processes > Launch.exe > End Process**. If necessary, toggle (Alt-Tab) back to the Database Installation, Net Service panel to continue.

12 In the last panel, where the Finish button is displayed, read and note the important information on this panel.

13 Select **View Readme.txt file?**, then click **Finish**.

14 After you close the **Readme.txt** file, click **OK** to finish the software installation.

To add and configure users, instruments, licenses, or perform any other post-installation administration, refer to the online help for the Cerity Software Administration application.

Step 3. Verify the Installation

1 Verify Service installation:

2 From the **Start** menu, click **Control Panel > Services**.

3 Check that for Cerity NDS Acquisition Controller the services listed in exist and are correctly configured

Table 14 Service names and configuration

Service Name	Startup Type	Log On As
• Agilent Event Distributor	Automatic	LocalSystem
• Cerity Automation Engine	Manual	Cerity Service Account
• Cerity Bootp Service	Manual	LocalSystem
• Cerity GNSFwdrService	Manual	LocalSystem
• CeritySecurity	Manual	LocalSystem
• Distributed Transaction Coordinator	Manual	LocalSystem
• OracleMTSRecoveryService	Manual	LocalSystem
• OracleOraHome92ClientCache	Manual	LocalSystem

4 Check that for Cerity NDS Review Client the services listed in exist and are correctly configured

Table 15 Service names and configuration

Service Name	Startup Type	Log On As
• Agilent Event Distributor	Automatic	LocalSystem
• Cerity Bootp Service	Manual	LocalSystem
• Cerity GNSFwdrService	Manual	LocalSystem
• CeritySecurity	Manual	LocalSystem
• Distributed Transaction Coordinator	Manual	LocalSystem

Table 15 Service names and configuration (continued)

Service Name	Startup Type	Log On As
• OracleMTSRecoveryService	Manual	LocalSystem
• OracleOraHome92ClientCache	Manual	LocalSystem

5 Verify the database connection

a From the **Start** menu, click **Start > Programs > Agilent Cerity > Cerity Software Administration**.

b Use the right mouse button to click **Cerity Software Administration** in the Console Root tree.

c Select **Add Database**.

d Enter the **Hostname (Computername)** where the Cerity NDS database server is installed. Click **OK**.

e Expand the database friendly name to verify that the connections and services are active.

Step 4. Customize the system

In this step, you complete the installation of your Cerity NDS system.

1. Log onto the computer as the administrator you used to install the Cerity software.
2. If this system is a Review Client, and you plan to use a Reprocessing Station for this computer, set as a string value the registry key **HKEY_LOCAL_MACHINE>SOFTWARE>Agilent>Cerity>Automation >Workcell > Host** to the machine name of the Reprocessing Station.
3. Click **Start > Agilent Cerity > System Administration Help**.
4. In the Contents panel, click **Getting Started with the Cerity Administration Software application**.
5. Follow the instruction to finish the installation.

The online instructions in the Cerity Software Administration utility help you to add users, instruments, licenses, and do other post-installation administration tasks.

5
Cerity Review Client on Terminal Server

Install and Configure the Terminal Services Server 92
Install and Configure the Terminal Server Client 98
Terminal Server Tuning 105

This chapter describes the installation process and configuration of the Cerity Review Client on a Windows 2000 Server with Terminal Services.

Terminal Server Emulation (TSE) mode is supported by Cerity NDS for Pharmaceutical QA/QC since the introduction of the software revision A.01.03.

Cerity Review Clients, installed on terminal server hosts, can host remote terminals that have no Cerity software installed. These terminal server clients function through private session access to the Cerity review client.

Install and Configure the Terminal Services Server

Step 1. Installation Prerequisites

Hardware requirements

Table 16 Hardware requirements for the Terminal Services server

	< 10 concurrent clients	< 25 concurrent clients
CPU	Dual Pentium IV, 1.4 GHz	Dual Xeon, 1.4 GHz
Computer Type	Desktop Computer or Server	Server
Memory	768 MB	2 GB
Disk	18.2 GB Ultra 3 SCSI; 10,000 rpm	18.2 GB Ultra 3 SCSI; 10,000 rpm (second disk might be added for redundancy)

One or more Windows 2000 Servers with Terminal Services can be configured to run the Cerity Review Client.

Software requirements

A complete Cerity cluster is already installed. A Cerity Database Server and Acquisition Controller(s) are already running without problems.

A Windows 2000 Server installed as member server of the same Domain as the Cerity Database Server and Acquisition Controller(s). For the installation a user with administrative rights on that Windows 2000 Server is needed.

The required Terminal Server Client Access licenses and a License Server. (see "Check Terminal Services Client Licenses" on page 98)

Step 2. Configuration of the Windows Terminal Services

This describes the steps needed to install the Windows Terminal Services on a Windows 2000 Server or Advanced Server system.

Installing Terminal Services in application server mode

1. Open **Add/Remove Programs** in Control Panel.
2. Click **Add/Remove Windows Components** to open the Windows Components wizard.
3. In **Windows Components**, select the **Terminal Services** check box, and then click **Next**.
4. In **Terminal Services Setup**, click **Application server mode**.

NOTE

In **Terminal Services Setup**, you may see programs listed that will not work properly when Terminal Services is enabled. You need to reinstall these programs for multi-user access using **Add/Remove Programs** after Terminal Services are enabled.

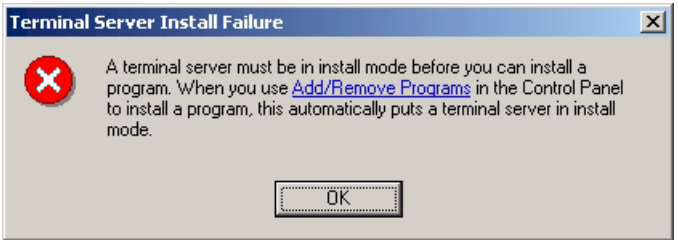
5. In the next screen, specify whether you want permissions to be compatible with Windows 2000 Users or with Terminal Server 4.0 Users. Select **Permissions compatible with Windows 2000 Users** for the most secure environment in which to run applications.
6. Click **Next**, and then click **Finish** and **Yes.**

After rebooting the system, a Terminal Server has been established.

Step 3. Application Software installation

The system detects installation processes to make sure, that all installed applications on the terminal server are installed multi-user and multi-session enabled.

Installing a software without being in the right terminal server mode can lead to the following dialog box on the terminal server screen:


Terminal Server Install Failure
A terminal server must be in install mode before you can install a program. When you use Add/Remove Programs in the Control Panel to install a program, this automatically puts a terminal server in install mode.
OK

Use either of the following methods to install programs for multi-session application server access:

- Use **Add/Remove Programs** in Control Panel.
- Use the **change user** command at the command prompt before and after installing the program.

Before the program is installed, **change user /install** places the system in install mode. After the program is installed, **change user /execute** returns the system to execute mode.

NOTE

Do not copy program files from one directory to another or manually edit the registry during installation.

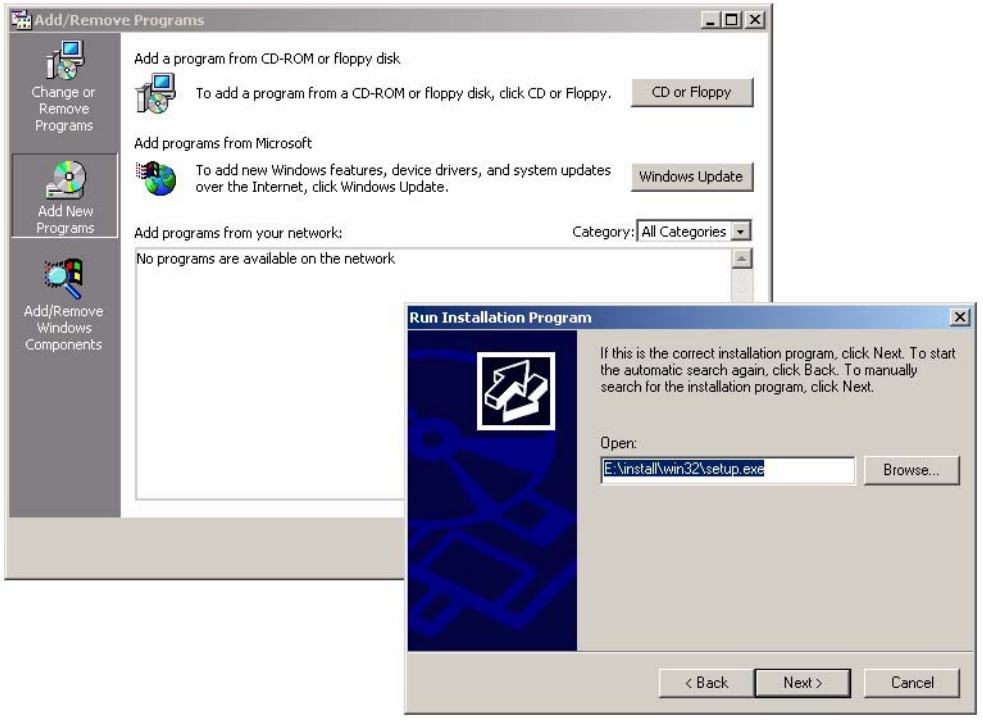
Install programs on the Terminal server local drive rather than on a file server. This improves program performance.

Install programs on NTFS file system formatted drives rather than on FAT formatted drives. You can only set file permissions on NTFS drives.

Step 4. Oracle Client Setup

Before the Cerity Review Client can be installed, the necessary Oracle software needs to be installed.

Make sure to run the setup(s) from within the control panel as described above.


Add/Remove Programs
Change or Remove Programs
Add New Programs
Add/Remove Windows Components
Add a program from CD-ROM or floppy disk
To add a program from a CD-ROM or floppy disk, click CD or Floppy.
CD or Floppy
Add programs from Microsoft
To add new Windows features, device drivers, and system updates over the Internet, click Windows Update.
Windows Update
Add programs from your network:
Category: All Categories
No programs are available on the network
Run Installation Program
If this is the correct installation program, click Next. To start the automatic search again, click Back. To manually search for the installation program, click Next.
Open:
E:\install\win32\setup.exe
Browse...
< Back
Next >
Cancel

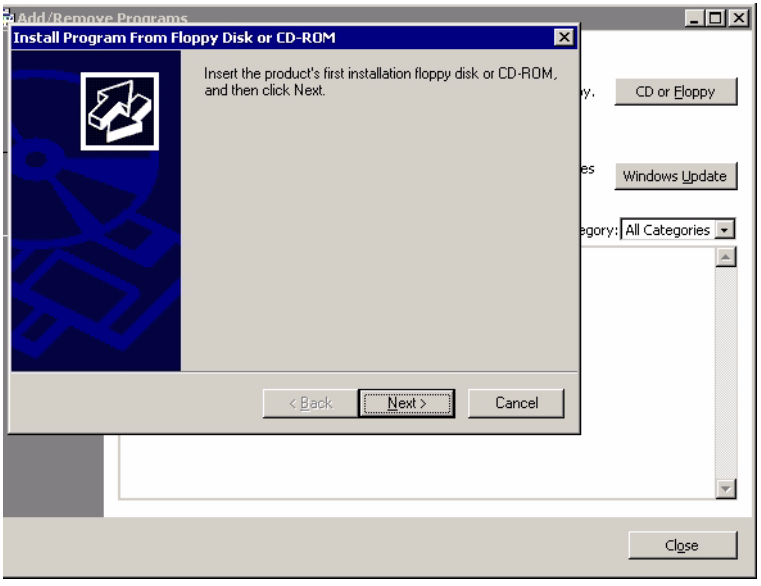
For more details on the Oracle Client installation, please see "Install Oracle Client" on page 72 of this guide.

The installation path for the oracle product may differ depending on the drive letter of your CD-ROM drive.

Step 5. Cerity Review Client Setup

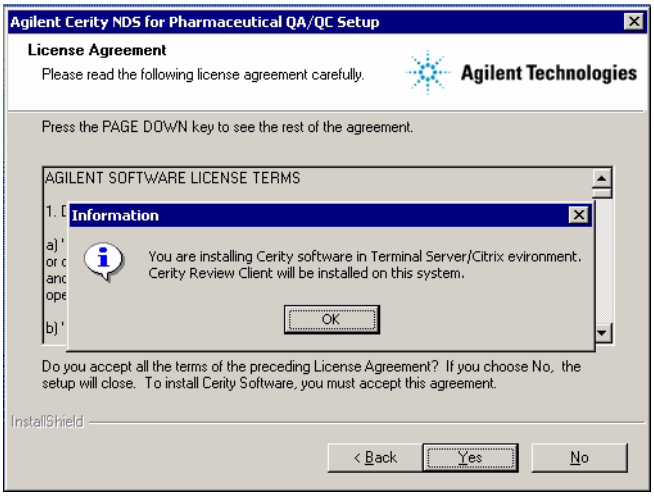
1 To start the Cerity Setup, use **Add/Remove Programs** in Control Panel.

2 select **CD of Floppy,** insert the Cerity Software CD-ROM and press **Next.**



NOTE The Cerity installation will determine by itself that it is run on a Terminal Server and switch into the correct installation modes, even if the installation reboots during the setup process.

The installation will pop up a message box telling the installer that only the Cerity Review Client can be installed on a Terminal Server. After that message box the installation runs exactly as it would do on a thick client machine.


Agilent Cerity NDS for Pharmaceutical QA/QC Setup
License Agreement
Please read the following license agreement carefully.
Agilent Technologies
Press the PAGE DOWN key to see the rest of the agreement.
AGILENT SOFTWARE LICENSE TERMS
Information
You are installing Cerity software in Terminal Server/Citrix evironment.
Cerity Review Client will be installed on this system.
OK
Do you accept all the terms of the preceding License Agreement? If you choose No, the setup will close. To install Cerity Software, you must accept this agreement.
InstallShield
< Back
Yes
No

3 Follow the instructions as described in "Install Cerity NDS software" on page 80 of this guide.

To access the Terminal Server it is now necessary to install the Terminal Service Client on the desired client machines.

Install and Configure the Terminal Server Client

Step 1. Install the Terminal Server Client

The Terminal Server Client installation can be found on the Terminal Server in the "%SystemRoot%\system32\clients" directory

NOTE If you share the "%SystemRoot%\system32\clients" directory, you can directly access it from the client computers and you do not need to create installation floppy disks.

Step 2. Check Terminal Services Client Licenses

Each client requires one of these license tokens to gain access to the terminal server unless the server is configured to use the Terminal Services Internet Connector.

A **License Server** is required. A license server is a Windows 2000 Server or Advanced Server machine that has been configured with the Terminal Services Licensing service.

The **License Server** stores all Terminal Services license tokens that have been installed for a group of terminal servers and tracks the license tokens that have been issued.

CAUTION Without a License Server, connections to the Terminal Server will be denied after 90 days.

For more information on Terminal Server Licensing, please refer to Microsoft Windows 2000 Terminal Services Licensing Technology White Paper at the following URL:

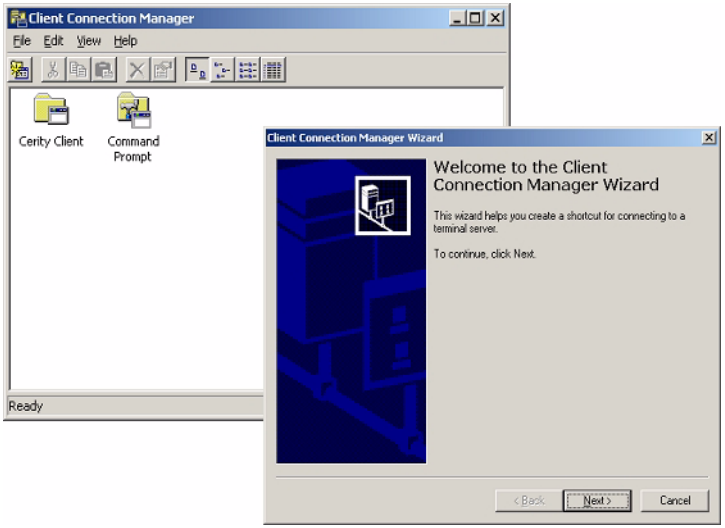
http://www.microsoft.com/windows2000/techinfo/howitworks/terminal/TSLicensing.asp

Step 3. Use Cerity Review Client

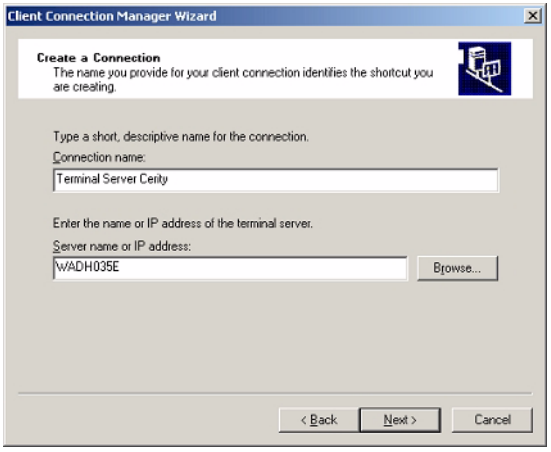
Generally there are two ways to deploy a software application that has been installed upon a Terminal Server:

- Using the **Terminal Services Client** to allow the users to access virtual desktops on the Server and run the application.
- Using the **Terminal Server Client Connection Manager**.

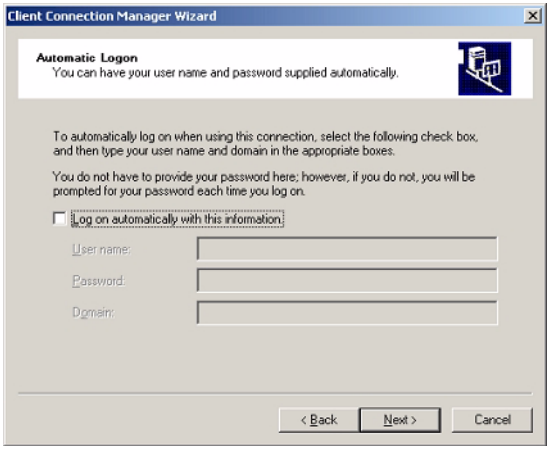
1 Start the **Client Connection Manager** and follow the wizard to create a new custom connection.


Client Connection Manager
File Edit View Help
Cerity Client
Command Prompt
Ready
Client Connection Manager Wizard
Welcome to the Client Connection Manager Wizard
This wizard helps you create a shortcut for connecting to a terminal server.
To continue, click Next.
< Back
Next >
Cancel

2 Choose a meaningful name for the Terminal Server Connection and enter the **Name** or the **IP address** of your Terminal Server. Click **Next**.

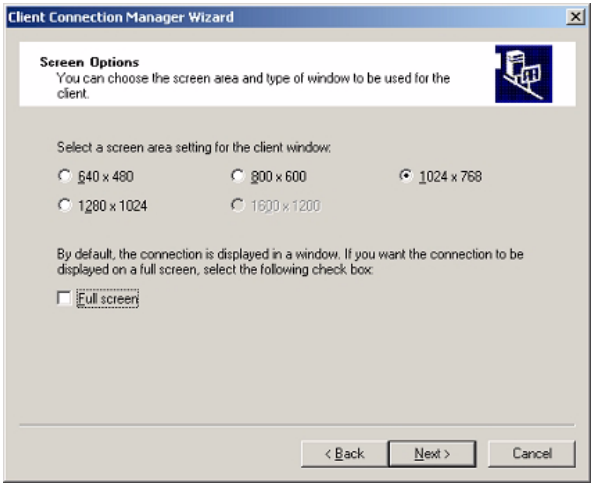

Client Connection Manager Wizard
Create a Connection
The name you provide for your client connection identifies the shortcut you are creating.
Type a short, descriptive name for the connection.
Connection name:
Terminal Server Cerity
Enter the name or IP address of the terminal server.
Server name or IP address:
WADH035E
Browse...
< Back
Next >
Cancel

3 In the Automatic Logon screen, Click **Next**

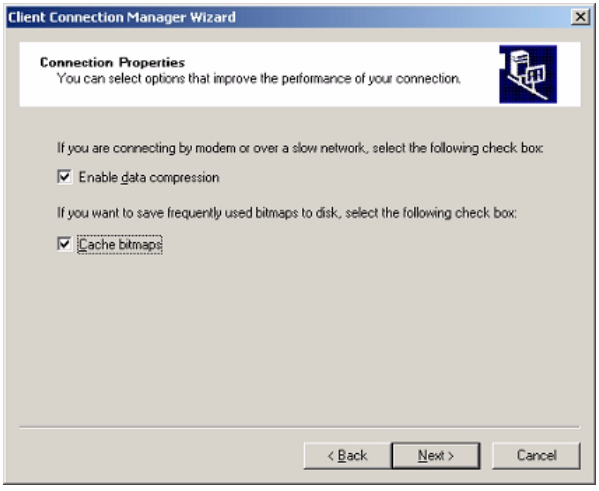

Client Connection Manager Wizard
Automatic Logon
You can have your user name and password supplied automatically.
To automatically log on when using this connection, select the following check box, and then type your user name and domain in the appropriate boxes.
You do not have to provide your password here; however, if you do not, you will be prompted for your password each time you log on.
Log on automatically with this information:
User name:
Password:
Domain:
< Back
Next >
Cancel

CAUTION If you enter a user name and password, they will be the default credentials for any user who will use the deployed connection afterwards.

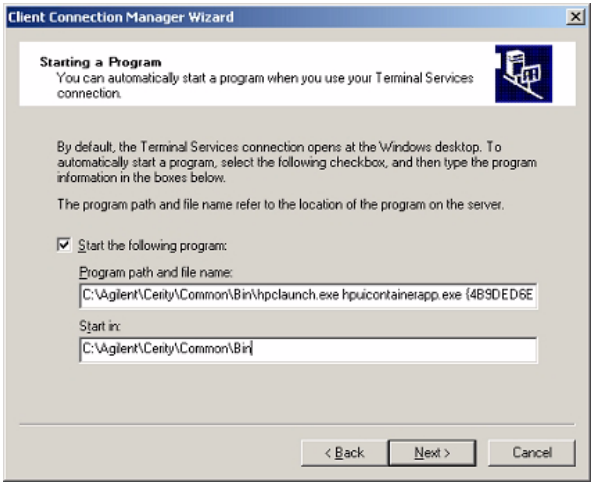
4 In the screen options, select at least 1024x768 pixels or Full screen. Click **Next**


Client Connection Manager Wizard
Screen Options
You can choose the screen area and type of window to be used for the client.
Select a screen area setting for the client window:
640 x 480
800 x 600
1024 x 768
1280 x 1024
1600 x 1200
By default, the connection is displayed in a window. If you want the connection to be displayed on a full screen, select the following check box:
Full screen
< Back
Next >
Cancel

5 To improve performances, select **Enable data compression** and **Cache bitmaps** in the **Connection Properties** screen and click **Next**


Client Connection Manager Wizard
Connection Properties
You can select options that improve the performance of your connection.
If you are connecting by modem or over a slow network, select the following check box:
Enable data compression
If you want to save frequently used bitmaps to disk, select the following check box:
Cache bitmaps
< Back
Next >
Cancel

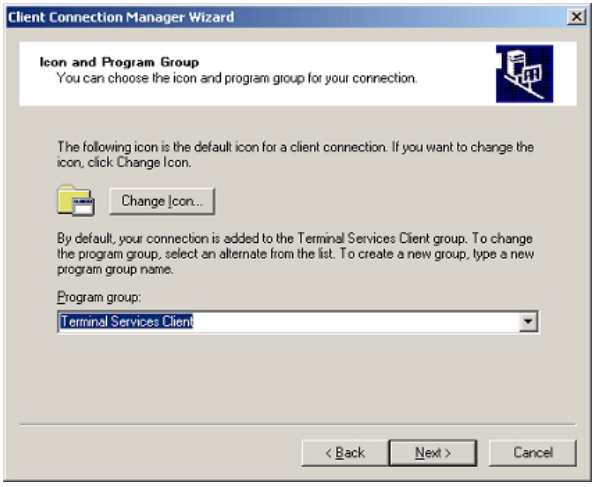
6 To automatically start the Cerity Review Client application when a Terminal Server Session is opened, specify the location of the Cerity client on the Terminal Server and click **Next.**


Client Connection Manager Wizard
Starting a Program
You can automatically start a program when you use your Terminal Services connection.
By default, the Terminal Services connection opens at the Windows desktop. To automatically start a program, select the following checkbox, and then type the program information in the boxes below.
The program path and file name refer to the location of the program on the server.
Start the following program:
Program path and file name:
C:\Agilent\Cerity\Common\Bin\hpclaunch.exe hpuicontainerapp.exe {4B9DED6E
Start in:
C:\Agilent\Cerity\Common\Bin
< Back
Next >
Cancel

NOTE

You can easily find the right entries on the Terminal Server by going to **Start > Programs > Agilent Cerity** and then right-click on **Cerity for Pharmaceutical QA/QC**.

7 You can change the icon and choose a program group where the new Terminal Server Connection will be located then click **Next**


Client Connection Manager Wizard
Icon and Program Group
You can choose the icon and program group for your connection.
The following icon is the default icon for a client connection. If you want to change the icon, click Change Icon.
Change Icon...
By default, your connection is added to the Terminal Services Client group. To change the program group, select an alternate from the list. To create a new group, type a new program group name.
Program group:
Terminal Services Client
< Back
Next >
Cancel

8 **Finish** the Wizard.

You will find a new icon in the specified location and additionally inside the Terminal Server Connection Manager.

It is now possible to export this new connection into a file using the Connection Manager and to deploy that connection to all machines that run the Terminal Services Client by importing them into the connection manager of the destination machines.

NOTE

To use other parts of the Cerity Review Client that way, make sure, that the program in the "Starting a program" page is an executable. If that is not the case, than you have to specify the executable that runs that program. For example, if you want to use the Cerity MMC Snap-In, the complete program path and file name is "**mmc <install-drive>:\<install-dir>\Common\Configuration\configuration.msc**" where install-drive is your installation drive (e.g. C) and <install-dir> is your Cerity installation directory.

CAUTION

When running Cerity Review Client on the Terminal Server under the RDP protocol the number of colors is restricted to 256. This limitation does not comply with the minimum requirements of Cerity as described in the installation manual. The Review Client will run normally with the windows default color settings.

Changing any color within Cerity can lead to unreadable user dialogs.

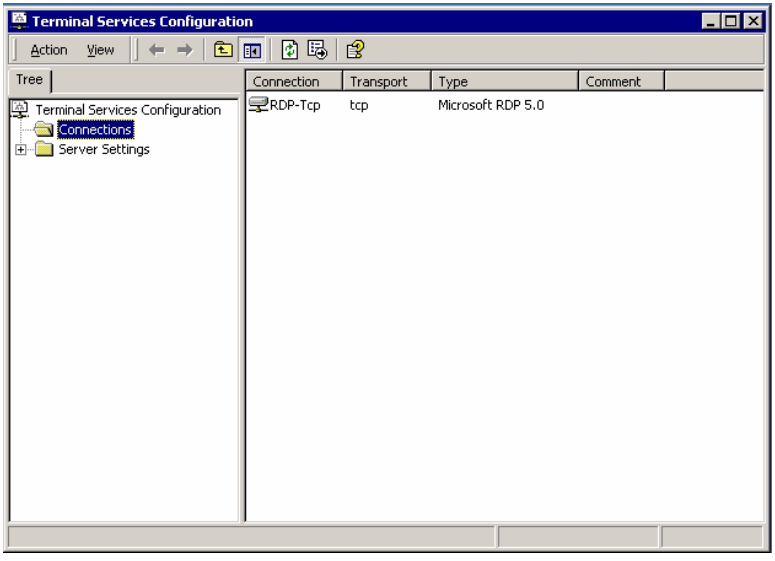
To avoid color problems, Citrix Metaframe's protocol ICA could be used upon a Windows Terminal Server.

Terminal Server Tuning

There are several settings that can lead to a more stable system behavior because they restrict the access and set rules for the default session behavior.

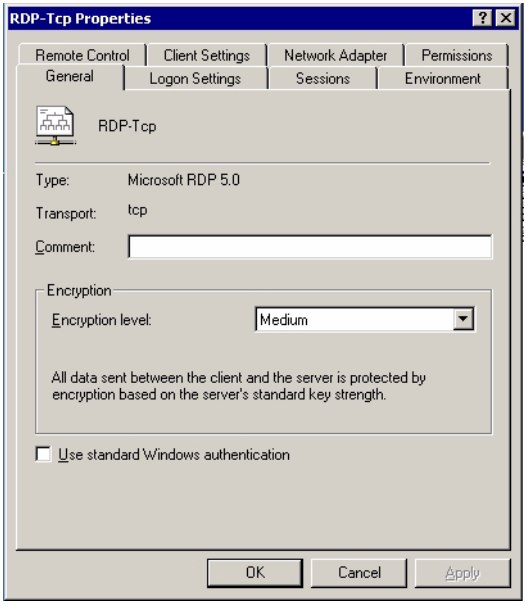
RDP-Protocol tuning

These rules are related to Terminal Server's RDP protocol and can be found in the **Start > Programs > Administrative Tools > Terminal Services Configuration**



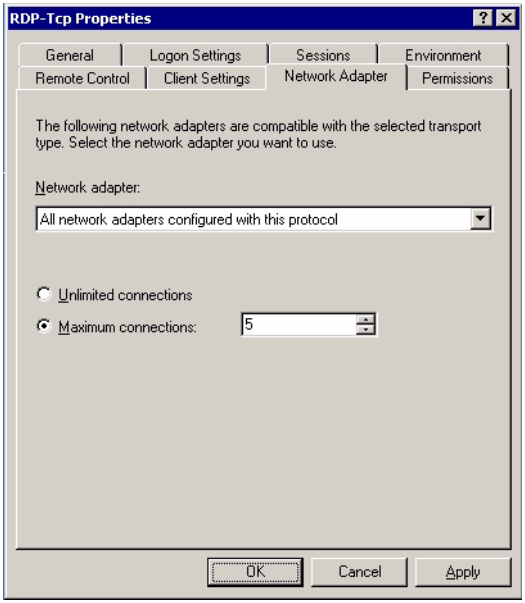
1 Right click the RDP-Tcp entry on the right side and choose **Properties.**

From the **Properties** Dialog, the Tab **Network Adapters** and **Sessions** are most relevant for the tuning.



2 Click on the **Network Adapter** Tab.

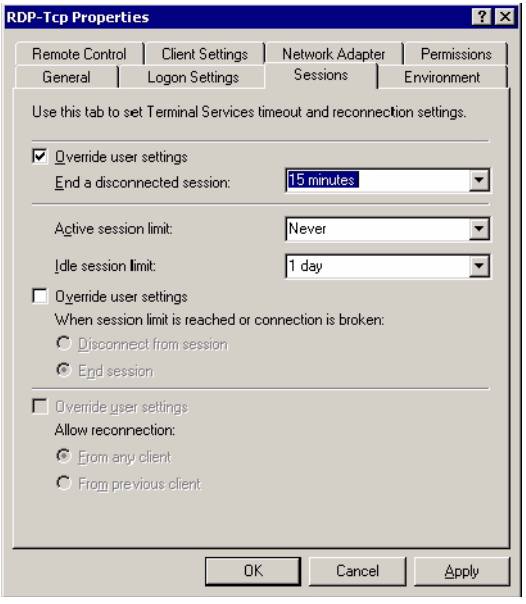
The number of connections can significantly impact the performances of the server. To prevent performance problems you can limit the number of concurrent connections in the **Network Adapter** Tab.



The number of concurrent users depends on the amount of installed memory on the Terminal Server. See Table 16 on page 92 to check the hardware requirements for Cerity.

3 Click on the **Sessions** Tab.

The **Sessions** Tab allows to periodically remove hanging sessions. It is very important to avoid that they block the Terminal Server for too long.



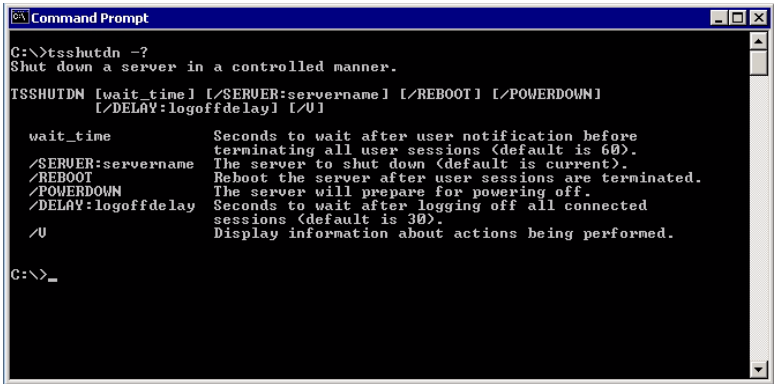
Reasonable values must be chosen. If the "**End a disconnected session**" value is set too high, that hanging sessions will block other users, if it is set to low, a reasonable user roaming is not possible any longer. For typical values see the screen above.

How often the Terminal Server needs to be rebooted?

To ensure stability of the Terminal Services server, it is recommended to periodically reboot the server.

To add maximum stability to the system the time period should be as small as possible. A reasonable time period must be defined, typically this is daily.

The Terminal Server has his own specific command line tool named **TSSHUTDN.EXE**.


Command Prompt
C:\>tsshutdn -?
Shut down a server in a controlled manner.
TSSHUTDN [wait_time] [/SERVER:servername] [/REBOOT] [/POWERDOWN]
[/DELAY:logoffdelay] [/V]
wait_time Seconds to wait after user notification before terminating all user sessions (default is 60).
/SERVER:servername The server to shut down (default is current).
/REBOOT Reboot the server after user sessions are terminated.
/POWERDOWN The server will prepare for powering off.
/DELAY:logoffdelay Seconds to wait after logging off all connected sessions (default is 30).
/V Display information about actions being performed.
C:\>

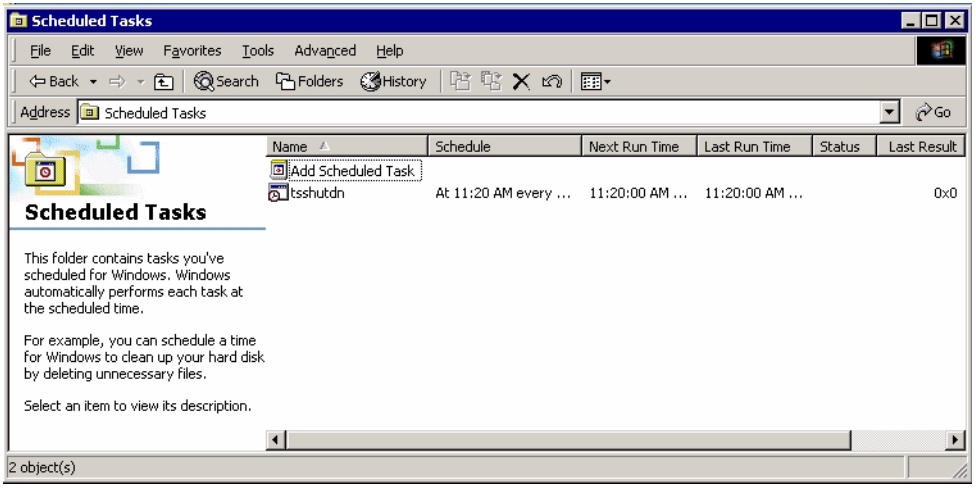
When the **TSSHUTDN.EXE**. starts, all connected sessions are notified that they are going to be shut down. Sessions that have applications with open files prompt the user to save the files.

Users are notified that their sessions will end and the server is shut down in a controlled manner. After initiating the logoff command, **TSSHUTDN** waits a specified interval (the default is 30 seconds, which is set by **/delay**), before ending all processes.

TSSHUTDN does not reboot the terminal server unless the **/reboot** option is specified.

To schedule a task like the **TSSHUTDN** the Windows 2000 Task Scheduler can be used. It can be found under **Start > Settings > Control Panel** and then **Scheduled Tasks**.

The following picture shows a daily shutdown of the Terminal Server.


Scheduled Tasks
File Edit View Favorites Tools Advanced Help
Back Search Folders History
Address Scheduled Tasks
Go
Scheduled Tasks
This folder contains tasks you've scheduled for Windows. Windows automatically performs each task at the scheduled time.
For example, you can schedule a time for Windows to clean up your hard disk by deleting unnecessary files.
Select an item to view its description.
Name
Schedule
Next Run Time
Last Run Time
Status
Last Result
Add Scheduled Task
tsshutdn
At 11:20 AM every ...
11:20:00 AM ...
11:20:00 AM ...
0x0
2 object(s)

6
Install Waters Alliance Instrument

Install the hardware 112
Install the Agilent I/O Libraries 113
Configure the Agilent I/O Libraries SICL Driver 120
Configure the GPIB 123
Connect the GPIB Cable 124

This chapter covers the installation of a Waters Alliance instrument to your Cerity NDS acquisition controller or Cerity NDS professional system.

Cerity NDS for Pharmaceutical QA/QC offers full control, including data acquisition, of the Waters Alliance LC system. The Waters Alliance system requires an 82350 PCI GPIB board installed in a dedicated computer.

Table 17 Supported Water Alliance modules

Name	Firmware	Comment
Waters Alliance 2690	1.21	82350 PCI GP-IB only
Waters Alliance 2695	2.0	82350 PCI GP-IB only
Waters 2487 Dual Wavelength Detector	1.01	82350 PCI GP-IB only

Step 1. Install the hardware

In this step you install the PCI GPIB board. Install it on the computer that is to be the acquisition controller. On some computers, the GPIB cable does not fit. Remove the connector housing if this happens.

NOTE If possible, do not mix instrument connectivity types to an acquisition controller computer. Network connected instruments are robust compatible. Agilent recommends that you dedicate a Cerity NDS acquisition controller to GPIB connected instruments.

1. Turn off the computer.
2. Disconnect any devices that are connected to the computer.
3. Remove the cover from the computer.
4. Select an empty PCI slot as far away from the graphic adapter as possible.
5. The GPIB connector is wider than a typical computer slot. You may need to leave the slot(s) adjacent to the GPIB interface empty.
6. Make a note of the slot number. You will use it later.
7. Remove the rear plate for the selected slot.
8. Hold the board by its edges and insert the board into the slot. Check that the edge connectors of the board are properly seated.
9. Lock the board into place with the mounting screw.
10. Replace the cover.
11. Plug the computer to a power source, and start the computer.
12. If you have difficulties during the installation, consult your computer manual, GPIB board documentation or dealer.

Step 2. Install the Agilent I/O Libraries

1 Verify the supported PCI GPIB card is installed, "Install the hardware" on page 112.

2 Prepare for and install Oracle software according to Chapter 1, "Prepare to install", Chapter 2, "Prepare Windows for Installation", and Chapter 3, "Install Cerity NDS Database Server or Cerity NDS Professional".

3 Turn the Computer ON. As Windows 2000 starts, the **Found New Hardware Wizard** will start. At this moment, select **Cancel**.

Found New Hardware Wizard
Welcome to the Found New Hardware Wizard
This wizard helps you install a device driver for a hardware device.
To continue, click Next.
< Back
Next >
Cancel

4 Using the Windows Explorer, locate and start **'Iolibs.exe'** in the GPIB directory of your CDROM. Follow the instructions in the installation Wizard. This will install the Standard Interface Control Library (SICL) on your computer, update

the registry and add a new Program Group called “Agilent I/O Libraries”.

5 The InstallShield Wizard opens and starts the IO Libraries installation.

6 When the title screen appears, click **Next** to go the License Agreement screen and then click **Yes** to accept the licenses terms and to display the Readme Information

7 Click **Next** to display the SICL installation directory screen. By default, SICL is installed in C:\Program Files\Agilent\IO Libraries. Click **Next** if you accept the default setting, or set the directory you want and click **Next** to display the VISA installation directory screen.

8 By default VISA is installed in C:\program Files\VISA. Click **Next,** if you accept the default setting, or set the directory you want and click **Next** to display the Select Type of Installation screen.

9 Choose installation **Option 1**, for a full installation of both the SICL libraries and VISA components. Then click **Next**.

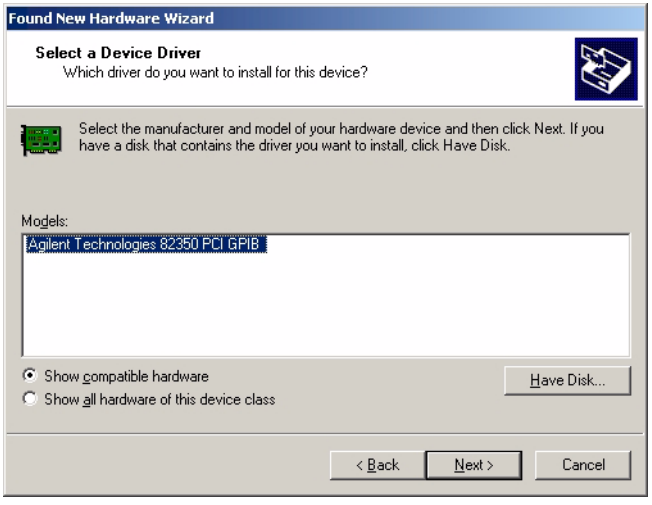
10 Select **Do not configure now** when you are prompted and click ***Next***.

11 Power cycle the computer. As Windows 2000 starts, the **Found New Hardware Wizard** will start. This time click **Next**.

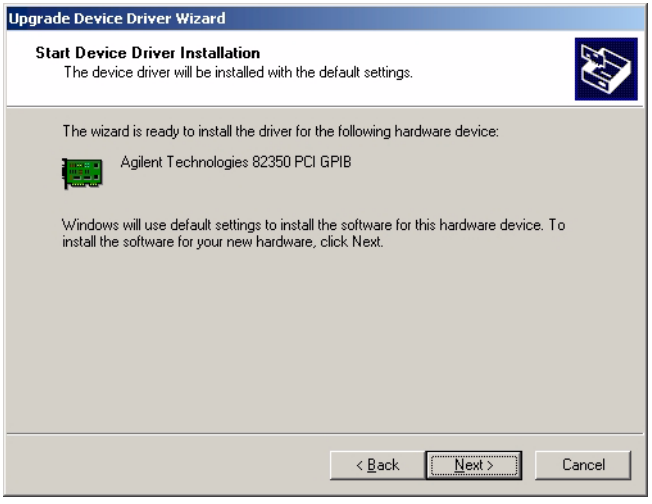
12 Select **"Display a list of known drivers for this device so that I can choose a specific driver"** and click **Next.**

Found New Hardware Wizard
Install Hardware Device Drivers
A device driver is a software program that enables a hardware device to work with an operating system.
This wizard will complete the installation for this device:
Agilent Technologies 82350 PCI GPIB
A device driver is a software program that makes a hardware device work. Windows needs driver files for your new device. To locate driver files and complete the installation click Next.
What do you want the wizard to do?
Search for a suitable driver for my device (recommended)
Display a list of the known drivers for this device so that I can choose a specific driver
< Back
Next >
Cancel

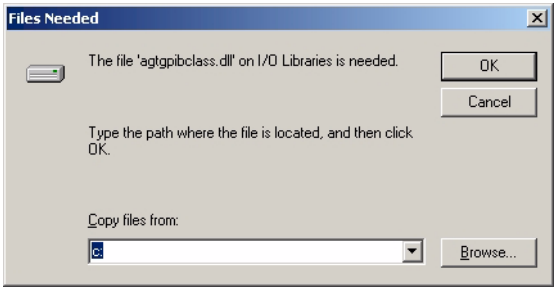
13 In the Select a Device Driver screen, click **Next**


Found New Hardware Wizard
Select a Device Driver
Which driver do you want to install for this device?
Select the manufacturer and model of your hardware device and then click Next. If you have a disk that contains the driver you want to install, click Have Disk.
Models:
Agilent Technologies 82350 PCI GPIB
Show compatible hardware
Show all hardware of this device class
Have Disk...
< Back
Next >
Cancel

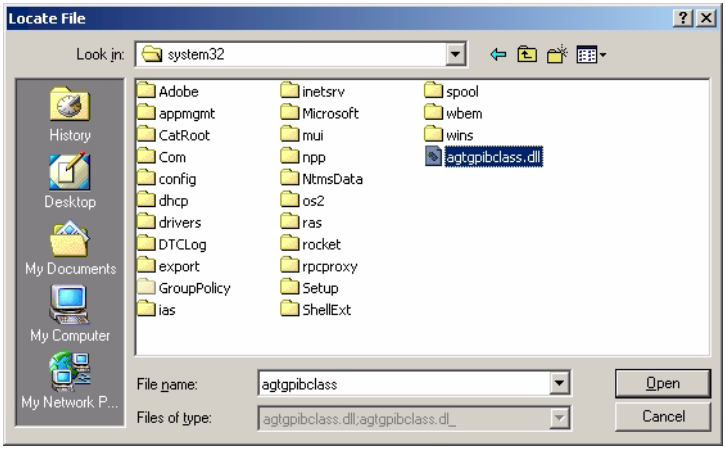
14 In the Upgrade Device Driver Wizard, Click **Next.**


Upgrade Device Driver Wizard
Start Device Driver Installation
The device driver will be installed with the default settings.
The wizard is ready to install the driver for the following hardware device:
Agilent Technologies 82350 PCI GPIB
Windows will use default settings to install the software for this hardware device. To install the software for your new hardware, click Next.
< Back
Next >
Cancel

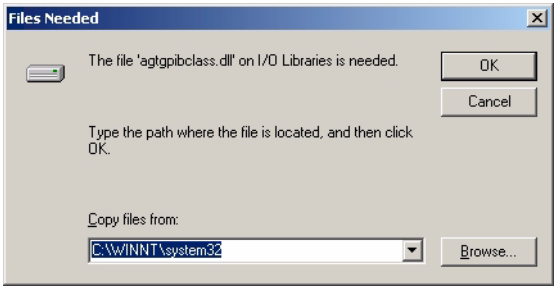
15 The wizard asks for the file **agtgpibclass.dll**



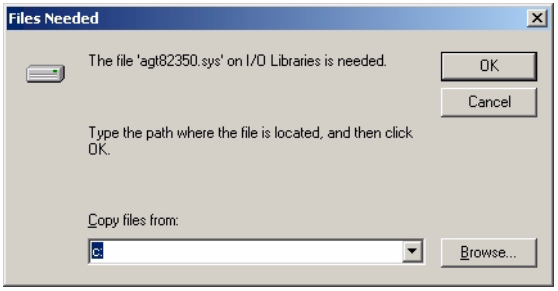
16 Browse to C:\windows\system32\ and click **OPEN**.



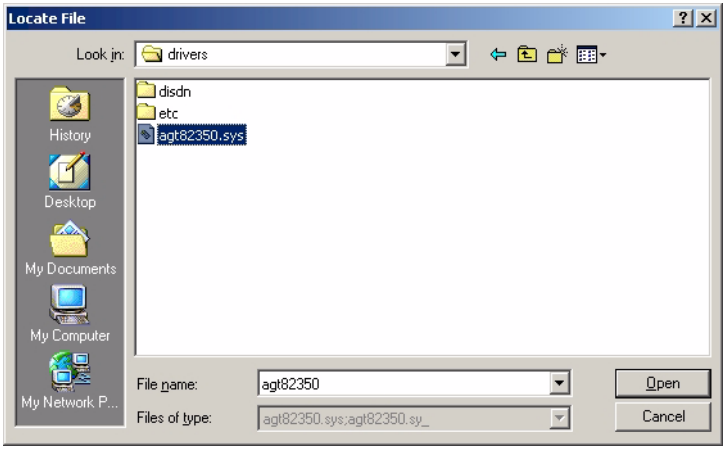
17 Select **OK.**



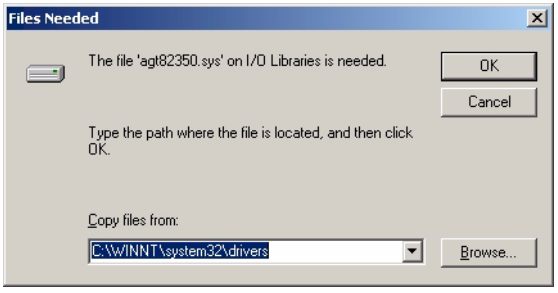
18 The wizard asks for the file **agt82350.sys.**



19 Browse to C:\windows\system32\drivers\ and click **OPEN**.



20 Select **OK**



21 Select **Finish**.

Upgrade Device Driver Wizard
Completing the Upgrade Device Driver Wizard
Agilent Technologies 82350 PCI GPIB
Windows has finished installing the software for this device.
To close this wizard, click Finish.
< Back
Finish
Cancel

Step 3. Configure the Agilent I/O Libraries SICL Driver

1 Click the blue **IO** icon on the system tray, then click **Run I/O Config**.

2 Select **82350 PCI GPIB**, then click **Configure**.

CAUTION Do not start I/O Config or Visa Assistant while Cerity NDS for Pharmaceutical QA/QC is running.

3 If you see "No 82350 PCI GPIB interface cards found":

- If a GPIB board was not installed, click **No** then click **OK** in the I/O Config - Interface Configuration Application screen. Continue the software installation at "Install Cerity NDS software" on page 80. Return to this Step to configure the SICL driver and GPIB after you install the GPIB board.
- If a GPIB board was installed, click **Yes** to view the help file. Click **OK** in the I/O Config - Interface Configuration Application panel to complete the software installation, or click **Help** to troubleshoot the problem.

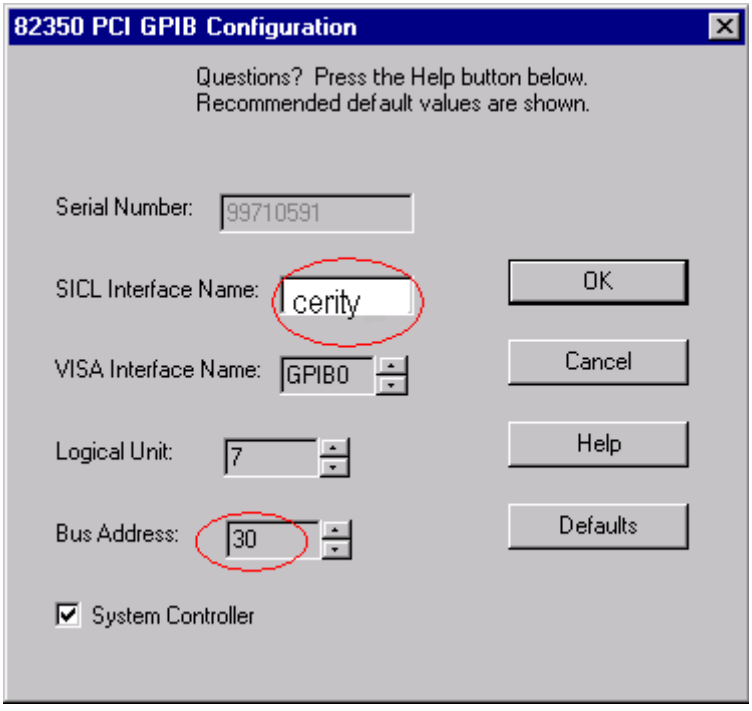
4 In the 82350 Configuration panel,

a Enter cerity as the **SICL Interface Name**. Use lowercase letters only.

b Set **Bus Address** to 30.

c Check **System Controller**.

d Click **OK** to continue.



5 Click **OK** in the I/O Config - Interface Configuration Application panel.

The GPIB Interface board is configured if you see the configured GPIB board under "Configured Interfaces" in the Interface Configuration Screen.

6 Restart the computer.

If you need to change your card or need to check the settings, you can open the interface configuration screen from the Agilent IO Libraries program group.

The fields in the 82350 PCI GPIB Configuration panel :

SICL Interface Name The SICL Interface Name is the symbolic name used by the Cerity software to identify and address this GPIB interface. The default Interface Name used by the Cerity software is **cerity**.

VISA Interface Name	The default VISA Interface Name is “GPIB0”. The Cerity software does not use this field.
Logical Unit	The Standard Interface Control Library (SICL) uses this number to identify as unique this GPIB interface. The Logical Unit number is an integer in the range of 0-10000. The Cerity software always uses the default value of 7.
Bus Address	The Bus Address sets the address of this GPIB interface on the GPIB bus. The Cerity software uses Bus Address 30 for the System Controller.
System Controller	The System Controller sets which bus devices talk and listen. Each device that is connected to the GPIB bus must have a unique GPIB bus address. For each device, only one device can act as the System Controller. In Cerity NDS for Pharmaceutical QA/QC software installations, the System Controller is always the GPIB card installed in the computer.

Step 4. Configure the GPIB

1 Start the program **c:\agilent\cerity\agtgpibcfg.exe.**

2 Select **New**.

3 Assign a unique instrument name for the Waters Alliance instrument.

NOTE You must use this unique instrument name in the Cerity Software Administration when you add the Waters instrument there.

4 Enter cerity as the **SICL Connection (Interface) name**.

5 Enter the GPIB address of the Waters 2690 Alliance LC. To find the current GPIB address of the device, consult the manufacturer's documentation.

6 If a Waters 2487 Dual Wavelength Detector is connected to the Waters 2690 Alliance,

- Select **New** and add the configuration information for the Waters 2487.
- Assign the same unique instrument name, previously defined.
- Enter the GPIB address of the detector.

Before you are ready to use the Waters instrument, you need to add the instrument to the Cerity application. You do this as part of the post-installation configuration.

Step 5. Connect the GPIB Cable

CAUTION Do not turn the power to a GPIB instrument off and on while other GPIB instruments are actively communicating to the GPIB controller. This can cause electrical sparks to corrupt the GPIB protocol. This can also cause you to need to turn the power to all instruments on and off, including the acquisition controller.

1 Turn off and unplug the computer and all attached devices.

2 Write down the GPIB address for each device. Refer to the documentation supplied with each device.

CAUTION No two devices connected on the same GPIB bus may have the same address. Alter their addresses as needed to avoid any duplication.

3 Connect one end of a GPIB cable to the computer's GPIB adapter connector. Connect the other end to the first device

4 Connect the rest of the devices in a chain. Do not use a star configuration.

5 Tighten all GPIB connectors.

Use short GPIB cables that are 2m long or less. These cables are available from Agilent Technologies.

Table 18 GPIB cables from Agilent Technologies

Length	P/N
GPIB cable 0.5 m	10833D
GPIB cable 1.0 m	10833A
GPIB cable 2.0 m	10833B
GPIB cable 4.0 m	10833C

7 Uninstall/Reinstall Cerity NDS Software

To remove only the Cerity NDS Software 126
To completely remove Cerity NDS software and data 127
To remove an Acquisition Controller 129
To reinstall Cerity NDS software without installing the database 130

This chapter describes how to uninstall the Cerity NDS software from your system, and to reinstall it (without reinstalling the database).

To remove only the Cerity NDS Software

Remove the Cerity NDS Software if you want to upgrade an existing Cerity installation.

1. Click **Start > Settings > Control Panel > Add/Remove Programs**.
2. Select **Agilent Cerity Networked Data System**.
3. Click **Add/Remove**.
4. If this computer is a Cerity NDS database server:
   a. Select **Do not remove the database.**
   b. Select **Yes, keep Cerity Report Directory**.
   c. Select **Yes** to deactivate the Schedule Service (Task Scheduler).

   These components remain on your computer:
   - Cerity Database
   - LNS Registry Key (**HKLM\SOFTWARE\Agilent\Cerity\LNS**)
   - Reports folder

   If this is a Cerity NDS acquisition controller or Cerity NDS review client, the uninstall proceeds without user intervention.

CAUTION Do not use Add/Remove Programs to install Cerity NDS software.

If you want to reinstall a Cerity NDS review client or Cerity NDS acquisition controller, run **setup.exe**.

If you want to reinstall a Cerity NDS database server, refer to the installation instructions in this guide, and use the same configuration parameters that you entered for the initial Cerity installation. Also verify that the Task Scheduler service is set to automatic and is started.

To completely remove Cerity NDS software and data

These steps apply to the Cerity NDS database server.

1 Click **Start > Settings > Control Panel > Add/Remove Programs**.

2 Select **Agilent Cerity Networked Data System**.

3 Click **Add/Remove.**

4 To completely remove the Cerity software and all the data:

   a Select **to Remove the Database** and delete the Cerity Report Directory.

   b Select **Yes** to deactivate the Schedule Service (Task Scheduler).

   If this computer is an upgraded Cerity NDS database server where the data was not removed, the uninstall leaves these components on the system:

   - Cerity Database
   - LNS Registry Key (**HKLM\SOFTWARE\Agilent\Cerity\LNS**)
   - Reports folder

5 Verify the uninstall and complete the removal of all data:

   a Run Oracle Database Assistant and check that your database instance (e.g. ServiceCTY1) is deleted.

   b Check that Cerity NDS software folder is deleted. At installation, the preset location is **c:\agilent\cerity**. You may need to restart the computer if some files are being used by other processes.

   c Check that the folder **c:\Program Files\Common Files\Agilent** is deleted. If you try to remove the folder and see an Access Denied error, then in Window's Task Manager, delete **Java.exe** and delete the folder again.

   d Empty the Recycle Bin if you need to recover disk space.

   e Check that under **HKLM\SOFTWARE\Agilent**, the key **Cerity** and its nodes are deleted.

f If there is not other Agilent software installed, check that under **HKLM\SOFTWARE**, the key **Agilent** and its nodes are deleted.

g Check that under **HKLM\SOFTWARE\Microsoft\Windows\CurrentVersion\Uninstall**, these entries are deleted:

- Cerity Software Platform
- {1015B92D-CC40-11D4-9619-0080AD72DCC4}
- {12BB5E26-D4A6-11D4-963E-0080AD72DCC4}
- {47EB0D7E-21CC-11D4-9966-0060B085549C}
- {ABB705D2-FAD7-11D3-91B1-0060B085549C}
- {B96D9ED9-752F-11D4-B04F-0060B0ED3286}
- {EEE9E550-DFD4-11D4-8579-0080AD72DCC4}

h Check that under **HKLM\SYSTEM\CurrentControlSet\Services**, all **Cerity Service** entries are deleted.

To remove an Acquisition Controller

You can safely uninstall the Cerity Application from an Acquisition Controller after deleting the configured instrument and after removing it from the configuration.

1 Start the **Cerity Software Administration Tool**
2 Open the Instrument folder and select the Acquisition Controller you want to remove
3 Remove the Instruments attached to the Acquisition Controller or move the instruments to a different Acquisition controllers if you will continue to use them.

CAUTION To prevent performance degradation, do not add more than 15 instruments per acquisition controller.

4 Remove the Acquisition Controller
5 Save your changes and close the Cerity Software Administration Tool

On the Acquisition Controller Computer

1 Click **Start > Settings > Control Panel > Add/Remove Programs.**
2 Select **Agilent Cerity Networked Data System**.
3 Click **Add/Remove**.

To reinstall Cerity NDS software without installing the database

This procedure is only performed after uninstalling the Cerity software, leaving the database and reports intact, in order to upgrade the Cerity NDS for Pharmaceutical QA/QC software.

CAUTION If you try to install setup type Cerity Database Server (w/o Database) on a computer that does not have an existing Cerity Database, the installation fails.

1 Start the Cerity NDS software Setup program.

2 Install the Cerity software according to Chapter 4, "Install Cerity Review Client, Acquisition Controller and Reprocessing Server", except select **Cerity Database Server (w/o Database)** when prompted for a setup type.

This process replaces corrupt software application binaries. This process installs Cerity Database Server software and uses an existing Cerity Database and LNS Registry Key. Once the installation is complete, you are able to access all of your data in the database.

3 Note that when you uninstall the Cerity software that has been installed this way, the uninstall does *not* remove Cerity Database, and LNS Registry Key. To completely remove Cerity NDS software and all of its components, refer to "To completely remove Cerity NDS software and data" on page 127.

8 Troubleshooting

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This chapter covers solutions to problems that you might encounter when you install the Cerity NDS software or the Oracle software.

General Cerity NDS Installation Problems

If you get an error message during installation

This solution applies if you see one of these messages.

- **Error extracting support files**
- **Error installing Ikernel.exe (0x any number)**
- **Access is denied**
- **Error loading Type Library/DLL**

✔ Check that you have administrative permissions to run an InstallShield Professional 6.x setup.

✔ Wait a few seconds, then run the setup again.

If you just ran an InstallShield setup, the engine takes a few seconds at the end of the installation to clean up. During this Ikernel.exe (the engine file) is running in memory from a previous process. That is why you are not allowed to launch another setup.

✔ Check and make sure Ikernel.exe is not in memory. If it is, and no setup is running at the time, end that task.

✔ Clean the temp directory.

✔ Delete the **Program Files\Common Files\InstallShield\Engine** folder and then rerun the setup.

✔ Reinstall IE 6.x and/or the MS Windows Service Pack. This can also repair a number of corrupted/missing core windows files from your machine.

✔ Check that Stdole32.tlb exists in your Windows folder. If not, copy it from another system of the same operating system.

If you get an error while you create a database

✔ Do these steps:

1 Click **Cancel**.

The installer removes partially-installed software from your system. This may take several minutes.

2 Click **OK** when you see an error message.

3 Uninstall Oracle.

4 Check that the registry does not have any Oracle-related entries.

5 Reinstall Oracle.

If you get an error message that the domain/login is not administrator

✔ Log in at least once on this system using that login.

If you see "No licenses available" when you add an instrument, MMC license node is empty, or trace shows authorization failures.

License Server is not running.

✔ Run **Start ' Settings ' Control Panel ' Services. Stop security services**, open **security services** using the **Startup** button. Change from **System Account** to **This Account** and enter the domain/login and password. Click **Ok**. Start **Security Services**. Run MMC again and then you will see entries under the MMC license node.

✔ Do these steps:

1 In each of the SQL file listed below:
(located under **<ceritydir>\common\database\ sqlscripts)**.

- **35900drv.sql**

- **agt1100als00.sql**
- **agt1100cluster00.sql**
- **agt1100clusterenu00.sql**
- **agt1100dad00.sql**
- **agt1100pumps00.sql**
- **agt1100tcc00.sql**
- **agt1100vwd00.sql**
- **agt2487mwd00.sql**
- **agt2690all00.sql**
- **ag2690allenu00.sql**
- **agtcolumn00.sql**

replace the following tokens:

Token	replace with
${method_setpoint_blobpath}	\\DBServer\CerityDatabase\Method_Setpoint
${device_blobpath}	\\DBServer\CerityDatabase\Device

Where <*DBServer*> stands for the name of the computer where the DB is installed.

2 Save the new SQL files.

3 Run these new files using SQLPLUS.

4 After all the SQL files are run, restart the computer.

If you see “Runtime error 226 at address <xxxxx>” or “Not enough disk space”

✔ Do these steps:

1. In the **<ceritydir>\pharmaqc\bin** folder, run `regsvr32 *.dll`, to register the DLLs in that folder.
2. Go to **<ceritydir>\common\configuration**, type at command prompt:
   ```
   Muskeditconfig /xmltodb pharmaqc-audit-esig.xml
   Muskeditconfig /xmltodb pharmaqc-capabilities.xml
   ```
3. Go to **<ceritydir>\pharmaqc\bin**, enter this at command prompt:
   ```
   agtimportmethod <connection string>
   ```
4. Go to **<ceritydir>\pharmaqc\tools,** enter at command prompt:
   ```
   agtimocreator -DB <connection string>
   -f imo_definition.ini
   ```

If you get “The RPC server is unavailable” or “The interface is unknown”

✔ Run Setup.exe again. This error occurs because Setup gets started before Window's RPC server is run.

If you see “Following HotFix(s) from Microsoft were not detected on the system.”

✔ If you see “Following HotFix(s) from Microsoft were not detected on the system.
-Q326407
Setup will now install these HotFix(s)..."
click **OK** to continue the installation.

The Cerity NDS software includes the required Microsoft HotFix(s).

If the system cannot detect the Oracle service/server

- ✔ Check the IP connection to the server.
- ✔ Check the Oracle TNS connection to the server.
- ✔ Check that the PORT is set to 1521.
- ✔ Check that PROTOCOL is set to TCP.
- ✔ Check that the Hostname is set to the computer name of the system where the database resides.
- ✔ Check that the appropriate Oracle services have been started on the database server

  CTY1 represents the default SID and default service selected during Oracle server installation. HTTP Server is not necessary.
- ✔ Check that the computer is a member of the domain in which the database server resides.
- ✔ Check that the correct User name information and password is used:
  - Cerity database server installation: *domain name*\ *domain username*

  If you do not know the computer name, click **Start > Setting > Control Panel > Network > Identification**. Refer to "Create computer accounts in the domain" on page 40.
- ✔ Check that the Cerity service account is a member of the local Administrators group of each computer.
- ✔ Check that **ceritycomm** exists as the Cerity service communication account. This account is used for Cerity service communication purposes.

If you get errors while you install software after you install Cerity

After the installation of Cerity NDS for Pharmaceutical QA/QC, Cerity Database Server installation type, you might experience errors installing other software. The errors will very in nature, depending on the particular application you are installing.

You can correct the problem in one of two ways.

✔ Uninstall the Cerity software and reinstall it after you install the other software:

1 Uninstall the Cerity NDS software. (See "To remove only the Cerity NDS Software" on page 126.)

CAUTION Do not remove the database nor reports, when uninstalling the Cerity NDS software.

2 Install the other software.

3 Install the Cerity NDS software without database. (See "To reinstall Cerity NDS software without installing the database" on page 130).

4 Uninstall the Cerity NDS software and restart the computer.

✔ Modify a key value in the registry.

1 Use a registry editor like regedit.exe to locate the following key: **HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\FileSystem NtfsDisable8dot3NameCreation0x00000001 (1)**

2 Double-click the value you want to change.

3 In Value data, type `0` (zero without the quotes) for the value.

4 Press **OK**, then **Exit** to continue.

5 Restart the computer to initiate the changes at the next logon.

NOTE If the system fails to restart, restart the computer, and select **Hardware Profile/Last Known Good** to restore your registry to the one used the last time you successfully logged onto Windows.

6 Log in to Windows and install the other software.

7 Change the key value back to `1` (number one).

8 Restart the computer.

Oracle Installation Problems

If you see “ORA-01017: invalid username/password; logon denied”

✔ Click **Change Login**. Enter `cagdbadmin` in **Username** and `hp` in **Password**. Then, click **OK**.
You get this message because the default username/password that Oracle Net Configuration Assistant Program uses is not valid for Cerity Database.

If you see “ORA-12514: TNS:listener could not resolve SERVICE_NAME given in connect descriptor”

✔ Create the <oracle home>\network\admin\listener.ora file:

1. Open Oracle Net Configuration Assistant
2. Select **Listener Configuration**.
3. Accept all default values.
4. Click **Next** until the **Finish** button is enabled.
5. Click **Finish**.
6. Open **Control Panel ‘ Services**.
7. Stop Oracle's TNSLISTENER service, then start it again.
8. If the problem persists after you restart the TNSLISTENER service, restart the computer.

If you see “ORA-12505: TNS:listener could not resolve SID given in connect descriptor”

✔ Check that in the file **oracle home\network\admin\listener.ora**, the host name and SID name matches your installation values.
This file must contain carriage returns at the end of each line.

If the Oracle Net Configuration Assistant program does not appear

The installation program shows **Loading Oracle Net Configuration Assistant Program. Please Wait** dialog but the Oracle Net Configuration Assistant does not appear.

✔ Do these steps:

1. Open the Task Manager.
2. End the task 'launch.exe'.
3. Click **Configure Net Service** to start the Oracle Net Configuration Assistant program.

If you see an error message that says that Oracle cannot be found

✔ Open a command prompt and type the following to stop and restart the TNSlistener.

```
DOS> lsnrctl
lsnrctl> set password oracle
lsnrctl> stop
lsnrctl> start
lsnrctl> exit
```

You should not see errors in the output from the start command.

✔ Remove any spx entries in the file <*oracle home*>*/network/admin/listener.ora*. Make sure you maintain the format. These are Novel network entries.

If setup was unable to detect a database server

If after you enter a Net Service Name, you see “Setup was not able to detect a database server as defined in Net service. Please configure a new Net service.” it is possible that the DHCP server is not handing out IP addresses correctly.

✔ Open a command prompt and enter
`tnsping net_service_name`

If the last line is:

```
Attempting to contact (..... some parameters
......)
TNS-xxxxx: TNS: <error message>
```

then:

1 Remove the extra dot ('.') that appears after a domain name in the following files:

<oracle home>\network\admin\sqlnet.ora

<oracle home>\network\admin\tnsnames.ora

<oracle home>\network\admin\listener.ora

2 Check that **sqlnet.ora** contains only these 3 lines:

```
NAMES.DEFAULT_DOMAIN = <your domain>
SQLNET.AUTHENTICATION_SERVICES = (NTS)
NAMES.DIRECTORY_PATH = (TNSNAMES, ONAMES,
HOSTNAME)
```

✔ Try the command `tnsping net_service_name` again. Check that you see:

```
Attempting to contact (..... some parameters
......) OK <number> msec'
```

If Oracle Installation fails because the Data Control for Oracle Objects for OLE is not registered properly with the operating system.

✔ Check the date of **c:\winnt\system32\mfc42.dll**. If it is before February 2, 2000, replace it with a newer version. Contact Agilent Technical Support.

If the system does not respond to the mouse or keyboard after you configure Oracle Net Configuration Assistant Program

Oracle Net Configuration Assistant Program is still running in memory.

✔ Minimize all other windows to make the Oracle Net Configuration Assistant program visible. Close the Oracle Net Configuration Assistant Program. If you cannot see the Oracle Net Configuration Assistant program, open Task Manager and end the program **Launch.exe**.

Cerity NDS Software Start Up Problems

If all toolbars in Application are black boxes with no images

✔ Click **Control Panel ‘ Display ‘ Settings ‘ Color Palette** and change to 256 or 65536 colors.

If you see “Error occurred connecting to this database” when you start Cerity

✔ Run the Oracle Net Configuration Assistant Program and create (or reconfigure) a Net Service Name with the same name as the database server.

This error is caused by not having a right Net Service Name on a client system. The Net Service name on a client system must match the Net Service name on a database server computer.

If there are no queries in method view

✔ Do these steps:

```
cd to <cerity>\common\configuration
MuskEditConfig /xmltodb
pharmaqc-audit-esig.xml
MuskEditConfig /xmltodb
pharmaqc-capabilities.xml
AgtImportMethod "<connection string>"
cd to ...\PharmaQC\tools
AgtImoCreator -DB "<connection string>” -f
imo_definition.ini
```

To obtain the "<connection string>”, open the registry using `Regedit` and go to `HKEY_LOCAL_MACHINE\Software\Agilent\Cerity\LNS`. Copy the value in the `Database` key.

This problem occurs when entries are missing from the database that are normally added during installation. This happens when the system crashes during installation.

If you get an empty UI Container Window when you start Cerity

✔ Enter these commands in a DOS command prompt window:

```
cd \PharmaQC\bin
for %a in (*.dll) do regsvr32 /s %a
```

Start Cerity software again.

This problem happens when Cerity components do not register in installation.

Network Connection Problems

If you have problems with the network

- ✔ Check all computer and network device cable connections.
- ✔ Check all instrument cable connections.
- ✔ Check that all network cables are properly connected.
- ✔ Check that the server, acquisition controller and review clients are running.
- ✔ Check that the necessary peripherals are attached and running properly.
- ✔ Check that the NICs connectivity/power lights are on.
- ✔ Check that recently added hardware is compatible with operating system.
- ✔ Check that the correct drivers are installed on the computers.
- ✔ Check that the instrument firmware is updated.
- ✔ Check that the JetDirect Card firmware is updated.
- ✔ Check that the instrument hand-held device firmware is updated.
- ✔ Check the TCP/IP connectivity
  - Check TCP/IP stack by pinging loopback address.
  - Check network connectivity by pinging another computer on the network.
  - Check internetwork connectivity, ping a computer on a different subnet.
  - Check IP address and global gateway instrument settings.
  - Check IP address and gateway settings.
  - Check DNS and WINS settings for name resolution.

- Check proxy settings.
- Check security policies and authentication settings.
- Check that the database server's TCP/IP settings are correct.
- Check that the Review client TCP/IP settings are correct.
- Check that the Acquisition controller TCP/IP settings are correct.
- Check that any switch, router, bridge or hubs are configured properly.
- Check that the DHCP IP address reservations for instruments.
- Check that the JetDirect Card model and firmware are compatible with DHCP environment.
- Check that the JetDirect Card is configured properly.

If you have problems with name resolution

- ✔ Try to ping another system by name, IP address and Net Service Name.
- ✔ Check DNS settings.
- ✔ Check WINS settings.
- ✔ Check HOSTS and LMHOSTS files.

Troubleshooting Cerity NDS application problems

- ✔ Check that the application interacts with networking.
- ✔ Check that all installed applications are compatible with the configured network settings.
- ✔ Check the event log for application errors.
- ✔ Check dbmk.log for “DBMK INSTALLATION SUCCESSFUL “ on database server.
- ✔ Check the application log (**Start >Programs > Administrative Tools > Event Viewer**) for errors.
- ✔ Check that the Acquisition Controller is configured?
- ✔ Instruments configured for the particular TCP/IP connectivity environment?

If you have print server problems

- ✔ Check that the printing device is working, and that all connections are secure.
- ✔ Check that the correct printer drivers are installed.
- ✔ Check the print spooler service is running.
- ✔ Check that there you have enough disk space on the server for spooling.
- ✔ Check the permissions set on the printer.

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In This Book

This guide provides you with the information you need to install the Cerity Networked Data System for Pharmaceutical QA/QC system.

After you install the software and hardware, you need to refer to the online System Administration guide to complete the set-up.

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